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UNIVERSITY OF ALBERTA

CORRELATES OF ATTITUDES TOWARD AIDS

BY

CHRISTOPHER WILSON

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA

(FALL 1990)

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SUBMITTED BY: CHRISTOPHER WILSON

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF: MASTER OF EDUCATION.

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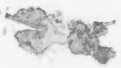
ABSTRACT

The Sexual Opinion Survey (erotophilia-erotophobia); the F Scale (authoritarianism), the Interpersonal Topical Inventory (cognitive complexity) and the Miller-Fisk Sex Knowledge Questionnaire (sex knowledge) were examined as predictors of knowledge of, and attitudes towards AIDS and responses to AIDS educational posters in a self-report questionnaire study of 131 undergraduate students at the University of Alberta. AIDS attitude and AIDS knowledge scales were constructed as criterion variables. Significant correlations were observed between attitudes towards AIDS and erotophilia-erotophobia, authoritarianism, cognitive complexity, sex and AIDS knowledge. AIDS knowledge and sex knowledge correlated significantly, despite low internal consistencies. Principal component analysis of the erotophilia-erotophobiia scale and the AIDS attitude scale yielded interpretable factors. The factor structure of the F Scale proved impossible to interprete. Factor loadings for the sex knowledge and AIDS knowledge scale were too low to interpret.

Attitudes towards AIDS and those at risk for AIDS were generally compassionate, although about 10% of the sample expressed restrictive and illiberal sentiments. AIDS was universally perceived to be serious. Respondents stressed the need for education, research and treatment, but were divided on issues relating to mandatory testing and provision of sexually explicit information in educational campaigns. Knowledge levels about AIDS, as measured by true-false questions were generally high, but misconceptions did exist among certain individuals. Responses to open-ended questions suggested some people possessed only partial knowledge about AIDS.

Negative, moralistic and punitive attitudes toward AIDS and those at risk for AIDS were concluded to be a component of prejudice and knowledge. Males tended to be generally more compassionate than females.

Semantic differential ratings of high and low scorers in various measures to each poster were compared. Differences were generally not found. Gender differences were also not observed. Significant differences in mean ratings between each of the posters on semantic differential adjectives were however found. Several empirical questions relating to behavior change were examined.



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CHAPTER 1.

INTRODUCTION

The acquired immune deficiency syndrome (AIDS) epidemic has the potential to become the greatest natural tragedy in human history (Masters, Johnson & Kolodny, 1988). Until recently, unplanned pregnancy was considered one of the most calamitous consequences of casual sex. The threat posed by the AIDS epidemic has largely minimized such concerns. Pregnancy is a natural consequence of sexual intercourse; death is not. The epidemic is in its ninth year. There is no cure in sight. Fears about sexuality no longer concern unsupportable and unwanted population growth, but rather, severe and even catastrophic depredation of vast numbers within specific population groups.

Public education about AIDS is almost universally advocated, not because it will necessarily work, but because there are few, if any, alternatives. Without a vaccine to prevent AIDS and a cure not expected for a number of years, effective education is the only viable means of controlling the epidemic. If public education is to have the remotest chance of succeeding, properly informed and targeted campaigns are essential. Preventive measures and educational campaigns should ensure the dignity of the person and respect human rights.

Psychologists routinely justify their activities by referring to the importance of a particular problem and, of course, the contribution of psychology to its resolution. When HIV sero-positive statistics refer to phalanxes of sturdily healthy people, the educational contribution of psychology to the problem of behavior and attitude change is crucial. An educational approach to AIDS, that incorporates personological factors derived from the discipline of psychology, does have a

contribution to make which may prove to be effective in slowing the spread of the disease.

Two psychological dimensions offer possible insights into the prevention of AIDS through education. The first dimension is literature pertaining to unplanned pregnancy: this focuses on modification of sexual behaviors. The second dimension deals with the concepts of attitudes; authoritarian beliefs and cognitive complexity. Efforts to prevent unplanned pregnancy and HIV transmission attempt to discourage casual sex, promote abstinence and advocate responsible or safe sexual practices. Attitudes to AIDS, AIDS victims, sexuality, prostitution and homosexuality are an integral part of such educative efforts.

In the past, educational campaigns have used fear tactics to make people afraid of AIDS and, consequently modify their behavior (Louria, 1988). But correct knowledge is essential to encourage informed, rational and logical personal judgements, and to thereby dispel panic-creating myths, which impede responsible attitude formation. To an extent, exaggerated portrayals of the disease are inimical to these objectives. Irrational beliefs must be countered to ensure that basic human liberties are promoted and that victims of the disease are not persecuted and stigmatized. Brandt (1988) observed that the analogy between reactions to AIDS and reactions in the early 19th century to venereal disease is striking. These reactions include "pervasive fear of contagion, concerns about casual transmission, the stigmatization of victims, the conflicts between public health and ensuring civil liberties" (p. 379). Historical events thus tell a great deal about contemporary approaches to many of the dilemmas caused by the new virus. People need to be aware of the dangers of AIDS, but a balance between awareness and panic-creation has to be achieved. The manner in which current society responds to this disease is perhaps not surprising, but it reflects fundamental social, ethical and moral reserves.

Examination of the unplanned pregnancy literature pinpoints the erotophobia-erotophilia personality dimension as an important predictor of sexual and contraceptive knowledge, behavior and attitudes (White, Fisher, Byrne & Kingma, 1977). Erotophobes tend to experience negative emotions towards sex (e.g., guilt, anxiety, denial) while erotophiles experience positive emotions toward sex (e.g., interest, pleasure, acceptance). Although erotophobes may be less sexually active than erotophiles, they may also be less knowledgeable about sexuality and contraception. They are also more likely to hold negative, moralistic and punitive attitudes about sexuality. One purpose of the study is to ascertain whether these findings generalize to AIDS. To elaborate, are erotophobes less knowledgeable about AIDS and sex than erotophiles and are erotophiles more knowledgeable about these issues? Moreover, if erotophobes are more likely to hold illiberal (restrictive, narrow-minded), moralistic and punitive attitudes, then is this related to the constructs of authoritarianism and cognitive complexity?

Authoritarianism derived its impetus initially as a study of social prejudice. It reflected a psychoanalytic model of personality, but came to be considered within a broader framework. Conceptualized as a syndrome that would make a person susceptible to antidemocratic movements (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950), its central thesis was that prejudiced and hostile attitudes were expressions of inner needs or impulses. Cognitive complexity is a different, but not an unrelated, concept (Harvey, Hunt & Schroder, 1961). This refers to levels of concreteness or abstractness which individuals possess in terms of intellectual processing. These levels develop along a continuum and influence the manner in which an individual is able to integrate and evaluate various sources of information, and finally act upon such information to varying degrees of flexibility and creativity.

Thus, authoritarianism and cognitive complexity may have relevance and heuristic value in AIDS education.

A further purpose of this study is to provide descriptive data about AIDS knowledge, sex knowledge and attitudes towards AIDS that may assist in targeting educational efforts. Concomitant to this, is an examination of possible differences in reactions among people to various educational stimuli used in public health campaigns. Conventional wisdom posits convergence of male and female sexual attitudes, but the very nature of AIDS may indicate such a viewpoint is no longer tenable. Thus, impetus exists for the analysis of the variables in this study along gender lines. Efforts to understand and check the spread of AIDS may necessitate personal and sexually explicit questions. A final aim of this study is to ascertain the acceptability of sex related research amongst Canadians.

This study does not attempt to examine, in depth, the behaviors and sexual habits of the sample surveyed. Its focus, rather, is to obtain a better understanding of the possible relationships between attitudes, knowledge and personality variables in relation to AIDS. This is an important starting point for educational approaches and further research. Suggestions for educational strategies are tentatively proposed.

CHAPTER 2.

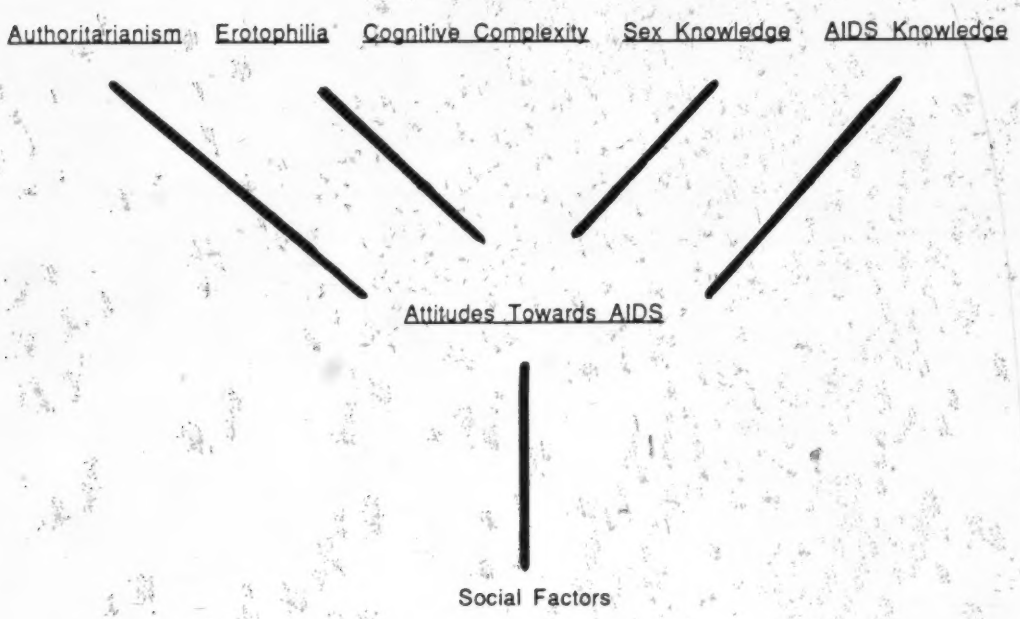
REVIEW OF THE RELATED LITERATURE

The literature review covers a broad area. It contains a summary of the major features of acquired immune deficiency syndrome (AIDS), common AIDS educational and preventive strategies and concerns, and highlights some methodological issues in sex research. (A review of the features of AIDS itself is included because it provided the basis for construction of the AIDS Knowledge Scale used in this study. The literature dealing with AIDS covers a period up to February, 1989, when the survey was conducted). A summary of the person-situation debate within personality is included because of its ramifications for the validity of this study. Evidence that erotophobia-erotophilia predicts sex knowledge and behavior, contraceptive use, attitudes to sexuality and responses to health education is considered. The applicability of authoritarianism and cognitive complexity as research measures in predicting illiberal and punitive attitudes is discussed.

Within the context of this study it is envisaged that many factors contribute to the development of attitudes towards AIDS within the individual. This can be represented conceptually in Figure I. Implicit in this conceptualization is acknowledgement that a myriad of external social factors exert their influence on attitudes towards AIDS, but cannot be measured by the present study. These factors include family influence, exposure to those with the disease and so on. The study's major premise is that the factors outlined in Figure 1 contribute substantially to attitudes towards AIDS and an attempt is made to measure those factors underlined in Figure 1. The literature review discusses these factors in the context of the disease.

Figure 1

Hypothesized Relationship of Variables Used in the Study With Attitudes Towards AIDS



Acquired Immune Deficiency Syndrome (AIDS)

Transmission and Epidemiology

Acquired immune deficiency syndrome was initially recognized in 1981 (Fettner & Check, 1985; Gallo, 1987; Quinn, 1987), after cases were diagnosed in young homosexual men in the United States (Gallo & Montagnier, 1988; Heyward & Curran, 1988). It was formally defined by the United States Center for Disease Control (CDC) in 1982 (World Health Organization [WHO], 1982). In retrospect, the first cases probably occurred in North America, Haiti and Central Africa in 1977 or 1978 (Biggar, 1986; Bybjerg, 1983; Quinn; Vandepitte, Verwilghin & Zachee, 1983). These cases lead to observations of aggressive Kaposi's Sarcoma and rare

opportunistic infections in patients from these regions between 1979 and 1981 (Clumeck et al., 1984; Fettner & Check; Siegal & Siegal, 1984). In 1984, its causative agent, a retrovirus subsequently named human immunodeficiency virus (HIV) by the International Committee on Taxonomy of viruses, was identified. Evidence of HIV infection can be found in almost every individual with AIDS (Gallo; Gallo & Montaigner). In addition, it seems likely that HIV has infected human beings for more than twenty years (Gallo; Piot, Plummer, Mhalu, Lamboray, Chin, & Mann, 1988).

When HIV enters a cell, an enzyme called reverse-transcriptase copies the genetic information of HIV into DNA, which is then integrated with the cell's own genetic information. Whenever the cell multiplies, the new cells contain the viral code. New viruses can also be produced to penetrate uninfected cells. HIV can destroy cells responsible for immune defenses, especially those against viral, parasitic and fungal infections (Gallo, 1987; WHO, 1986a, 1986b). The United States Center for Disease Control recognizes four levels of HIV infection: initial infection and antibody production (acute infection); asymptomatic infection; persistent generalized lymphadenopathy; and finally frank AIDS (Nichols, 1989; WHO, 1986a). Frank AIDS is fully expressed AIDS - symptomatic with life threatening opportunistic infections (Daniels, 1987). There is no cure for AIDS, but some antiviral drugs, notably azidothymidine (AZT), may prolong life (Hirsch & Kaplan, 1987). A variety of other drugs are on trial and these, perhaps combined with compounds that boost the immune system, may provide therapy for HIV infection (Gallo & Montaigner, 1988; Nichols; Yarchoan, Mitsuya & Broder, 1988). It is presently impossible to get rid of the underlying AIDS infection (Spurgeon, 1988).

HIV is transmitted through vaginal or anal intercourse, transfusions of infected blood products, injection or puncture with infected needles or sharp instruments, and

vertical infection from mother to child (Biggar, 1986; Mann, Chin, Piot & Quinn, 1988; Quinn, 1987). Whereas anal intercourse and, increasingly, intravenous drug use are responsible for most HIV infection in North America and Europe, bidirectional heterosexual transmission is the major means of infection in Africa (Abramson & Herdt, 1990; Biggar; Koch-Weser & Vanderschmidt, 1988; Piot, Plummer, Mhalu, Lamboray, Chin & Mann, 1988; Quinn; Quinn et al., 1987). This is a trend that may be becoming more prevalent in America and Europe (Heyward & Curran, 1988; Masters, Johnson & Kolodny, 1988a; Spurgeon, 1988). The ratio of male to female transmission of roughly 1: 3.5 in America is probably due to a larger pool of men infected by other means. The frequency of female-to-female transmission is universally very low. One of the fastest growing group of AIDS cases is that of children (Heyward & Curran).

Everyday social and nonsexual family contact with infected individuals does not transmit HIV (Heyward & Curran, 1988). Over 10 studies of 600 family members of AIDS victims in Africa, Europe, and North America fail to show HIV transmission, except in the instances of coital and perinatal transmission. Food and drink do not spread HIV. Sharing crockery, cutlery, towels and toilets does not lead to HIV infection (WHO, 1986a). Overwhelming evidence shows that HIV is not contracted by feeding and caring for an AIDS victim- unless needlestick injury occurs, in which case risk of transmission is approximately 1% (WHO, 1986a; Weiss & Biggar, 1986).

Mutual masturbation carries little risk of HIV infection (Bingham & Gilson, 1986; Goedert, 1987). Oral-genital transmission is probably rare (Chmiel et al., 1987; Shechter et al.,1986), but oral-genital sex should not be considered an absolutely safe practice (Bingham & Gilson; Goedert). Concerning transmission by saliva or kissing, HIV has been found in saliva (Ho et al., 1985; Ho, Pomeranz &

Kaplan, 1987). However, the concentrations are so low that 4 to 6 liters may be required to transmit HIV (Dr. Latif, personal communication, April, 1986; Spurgeon, 1988). Spurgeon notes that evidence indicates that the saliva would have to be introduced directly into the blood stream to sero-convert. Fultz (1986) further found that saliva inactivated HIV. Considerable evidence shows that HIV is not transmitted by "dry" kissing a seropositive individual or using utensils exposed to the saliva of seropositive people (Ho et al.). It is not certain whether "wet" kissing is completely safe (Voeller, 1986), but it is probable, not proven, that saliva and kissing do not spread HIV. Transmission through insect vectors is also extremely unlikely (Heyward & Curran, 1988; Mann et al., 1988). Spurgeon stresses that the only HIV infections documented, so far, have resulted from blood to blood, or semen to blood transmission.

Precautions against HIV include avoidance of: multiple sexual partners; vaginal or anal intercourse unless a condom is used; any sexual practice that draws blood; transfusions of unscreened blood or blood products; injections or punctures with used, unsterilized needles or sharp instruments; and sharing any object exposed to blood or semen- e.g., razors, sex toys (Bingham & Gilson 1986; Goedert, 1987; Nichols, 1989; WHO, 1986a).

As of May, 1987, 105 countries reported 49,132 cases of frank AIDS to the World Health Organization (Mann, 1987). Nineteen African countries reported over 2,000 cases. Actual figures may be several times higher (Quinn, 1987). The number of countries now reporting to the World Health Organization is 175. As of August, 1988, these countries reported 108,176 cases of AIDS (Mann et al., 1988). By July the same year, a total of 66,464 cases of AIDS had been reported to the United States Center for Disease Control. Just over half are dead (Heyward & Curran, 1988).

There is a tremendous disparity between the number of reported AIDS cases and the possible number of HIV infected people. The United States Public Health Service has estimated that between one and one and a half million people are infected with HIV in America. Epidemiologists estimate that in Europe at least half a million people may have been infected with HIV. Available data suggest that between two to three million may be infected in Africa. Conservatively, about five million people may be infected worldwide (Mann et al.; Mann; Quinn; Spurgeon, 1986). Predictions are complicated by a number of aggravating cofactors. Once AIDS is developed the fatality rate is very high, even reaching 100% (Mann et al.).

At the time this study was conducted, 139, 886 cases of AIDS had been reported to the World Health Organization (Health and Welfare Canada, 1989c). Just over 98,000 cases were reported from the Americas (Health and Welfare Canada). Figures for Europe, Africa, Asia and Oceania were significantly lower, but this is in all probability an artifact of the lower number of countries reporting to the World Health Organization.

Estimates of the proportions of HIV infected people who will develop symptoms or frank AIDS are constantly revised upward (Curran et al., 1985; Goedert, 1987; Royal Society of Canada, 1988; Weiss & Biggar, 1986). Some suggest that every year 8 to 10% of asymptomatic HIV carriers will develop symptoms and that 2 to 10% will develop frank AIDS (WHO, 1986a). In North America and Europe, about half of adults and two thirds of children with AIDS since 1981 have died (WHO, 1986a). Over 80% of these patients in these regions die within three years of diagnosis (Weiss & Biggar). Consistent, with this Heyward and Curran (1988) estimate 80% of those diagnosed as having AIDS before 1985 are now dead. Survival periods are markedly shorter in Africa, perhaps because of belated diagnosis, poor nutrition and health and limited care (WHO, 1986a; Mann et al, 1988).

In Canada, Spurgeon (1988) notes, that as of September, 1987, the best available estimate of the total number of people infected with HIV was about 30,000. As of November, 1989 just over 3,200 people in Canada had died of AIDS (Health and Welfare Canada, 1989b). The number of persons dying of AIDS in this country is rising compared with other causes of death, and by 1992, AIDS could become the leading cause of death for men aged 22 to 40 (Royal Society of Canada, 1988).

Levels of Information, Knowledge and Behavior Change

In developed countries widespread literacy, extensive media attention and the investment of financial resources to the problem suggest it is conceivable that ignorance may be eradicated. This is only half the battle. In the United States and Canada, evidence suggests that homosexuals are well informed about AIDS (Feldman, 1986; Fineberg, 1988a), but that ignorance is widespread amongst intravenous drug users. Becker and Joseph (1988) suggest behavior change amongst urban homosexuals has been profound. Less conclusive data exists for the general population (Altman, 1986; Fettner & Check, 1985; Leishman, 1987; Siegal & Siegal, 1984). Evidence of a study of knowledge, behavior and attitudes of 38,000 Canadian youths suggest that levels of knowledge about AIDS have not been sufficient to deter a number of individuals from indulging in risky sexual behavior (King et al., 1988). Fineberg concluded that there was a large gap between AIDS knowledge and behavior change, based on a survey of New Yorkers. Baldwin and Baldwin (1988a) reach similar conclusions. Kegeles, Adler and Irwin (1988) found that sexually adolescent youths in San Fransisco did not modify their behaviors, despite acknowledgement of the problems associated with sexually transmitted diseases. Sherr (1987) found similar results in a study conducted in Great Britain.

Evidence suggests that such campaigns have increased knowledge (Kegeles, Adler & Irwin, 1988; Kelley, Lawrence, Hood, & Brasfield, 1988; Sherr, 1987,

Temoshok, Sweet & Zich, 1987; Wertz, Sorenson, Liebling, Kessler & Heeren, 1987), but the gap between knowledge and personal action remains vast. In a poll conducted in America in 1987, more than 90% of respondents knew they could contract AIDS from having sex and sharing needles with someone already infected with AIDS. Yet they regarded the risk of themselves getting the disease as low or minimal (Fineberg, 1988b). In a survey conducted in New York, 80% of the respondents agreed that sexually active people should carry condoms and women should tell their partners to use condoms. However, the reported number and frequency of sexual contacts in the preceding month had not changed. Even more significantly, more than 60% of those surveyed said they had failed to use a condom more than once (Fineberg). In a random sample survey of 860 adolescents, Strunin and Hingsen (1987) found that 70% of teens in Massachusetts reported being sexually active, but only 15% reported changing their sexual behavior because of concern about contracting AIDS. Of those who had made changes, only 20% reported using condoms or abstaining from sex. Fifty-four percent of those in the study did not worry about contracting AIDS. In a Southam News-Angus Reid poll, although 86% believed AIDS could affect all Canadians, only 14% said they had changed their behavior (Feldman, 1986). Baldwin and Baldwin (1988a;1988b), Baldwin, Whiteley and Baldwin (1990), Freimuth, Edgar and Hammond (1987), Goodwin and Roscoe (1988), and Katzman, Mullholland and Sutherland (1988), cite evidence that moderately well informed individuals are continuing to engage in risky behaviors without protection. Knowledge and attitudinal changes often were noted, but behavior change was not conclusively or consistently documented.

Education and Prevention Issues

Most of the efforts to prevent the spread of AIDS have focused on educational strategies aimed at increasing knowledge and awareness and, thus, hoping to bring about behavioral change. Posters, leaflets, pamphlets, radio and television advertising and a number of grass-roots organizations have all been part of numerous campaigns directed at communities in many parts of the world (Fineberg, 1988a). The source of the information is apparently also very important. Adolescents in school and college or university students in Canada generally preferred to get information about AIDS from official medical sources. School dropouts indicated they would prefer to get information from school (King et al., 1988). Individuals within the gay communities in Edmonton prefer to receive information from medical sources (Wayne Hillard, Director, AIDS Network, Edmonton, personal communication, December 1988).

Much of the controversy surrounding AIDS education focuses on the prophylactic use of barrier contraception in the form of the condom. Many people feel that advocating the use of condoms is an implicit endorsement of promiscuity (Nichols, 1989). Nichols maintains that the condom debate involves two issues, "one moral and one scientific" (p. 148). The two are difficult to divorce.

Conservative educators maintain that specific guidelines on how to practice safer sex or avoid drug related infections simply encourages individuals to pursue what they regard as socially unacceptable behavior. They advocate that sex with one mutually faithful partner, preferably within a formal relationship, is the solution. Many people will not follow that pattern. Reis and Leik (1989), for example, observe that "Moral preferences aside, this is a demonstrable fact" (p. 412). They evaluate two of the most widely advocated means of reducing transmission - condom use and restriction of number of sexual partners. Constructing a probability model,

they conclude the number of partners has little impact on the necessary effectiveness of condom use, suggesting the condom remains the major factor in risk reduction and efforts should be focussed on convincing people to use reasonable protection.

With a moral debate of this importance, it is possible to turn to the time honored principle of the "lesser of two evils" initially propounded by St. Augustine and St. Thomas Aquinas. Although a primary position may be that chastity and celibacy is the most effective preventive measure, those unwilling to refrain from casual and non-marital sexual activity should consider utilizing prophylactic measures to reduce risks of infection. In this case, the use of condoms could be regarded as less of an "evil" than contracting AIDS. The Catholic Church, for example, implicitly adopts this stance stressing that persons with AIDS must be given the compassion of Christ, they may not be judged to be sinners, and that AIDS is not punishment from God. Discrimination against AIDS sufferers is considered a violation of justice and consequently is ethically and morally wrong. A number of Christian churches have adopted similar standpoints (Hallman, 1989).

Nichols (1989) notes that past experiences indicate campaigns urging adolescents to abstain from sex have had little effect on the teenage pregnancy rate in the United States. It remains one of the highest in the developed world. In addition, Nichols points out that approximately 2 1/2 million teenagers in the U. S. contract a sexually transmitted disease each year. Campaigns that emphasize abstinence as the only solution to prevention of HIV infection would probably not be effective. King et al. (1988) concluded that, because most adolescents valued sexual activity, preaching abstinence as a means of preventing AIDS would not be as effective as encouraging informed and responsible sexual behaviors.

With regard to the latter issue, although condoms do reduce the risk of HIV infection, they do not necessarily eliminate it. No condom is effective if it is not used

properly. The number of times, for example, that condoms fail to prevent pregnancy may be as high as one in ten (Nichols, 1989) or even 30 in 100 (Spurgeon, 1988). That risk reduction, and not necessarily risk elimination is possible, is the key message to convey (Reiss & Leik, 1989). It is vital to emphasize that AIDS is to a large extent transmitted through readily identifiable and voluntary behaviors. This makes it possible to prevent its spread through adoption of responsible behaviors (Mann et al., 1988).

The U. S. Center for Disease Control (1988) laid out a number of guidelines for effective education against the spread of AIDS. These guidelines stressed that "the specific scope and content of AIDS education in schools should be locally determined and should be consistent with parental and community values". A global program initiated by the World Health Organization has three objectives: to prevent new HIV infections; to provide support and care to those already infected; and to link national and international efforts against AIDS. King et al. (1988) noted that to a marked extent Sexually Transmitted Disease (STD) education had been ineffective. Spurgeon (1988) concurs. King et al. (1988) recommended that the probability of contracting AIDS be presented to youths in such a manner that they regard it as "substantial and real". Learning activities should involve meeting those who have AIDS. In addition, "Alternative forms of sexual expression that do not involve risks should be discussed". Finally, values and interpersonal skills relating to "responsible sexual activity" should be promulgated (p. 141).

Australia's National Advisory Committee on AIDS showed that most Australians possessed "partial knowledge about AIDS.... People were as confident of their incorrect knowledge as they were of their correct knowledge" (Spurgeon, 1988). Evaluation of the Australian campaign revealed eight barriers to information absorption and behavior change. These included the following: prejudice, which

results in stereotyping; moral views (a higher level of prejudice was found among frequent churchgoers); blind trust of a partner; a belief that AIDS is relevant only to "other people"; a message that is too reassuring; paranoia, which results from too little reassurance; a negative image of condoms; and a perception that condom use may be seen as an acknowledgement of "guilt" (Spurgeon, p. 79).

Health officials have focused too, on the increase in transmission amongst intravenous drug users. Calls have been made for renewed and more extensive drug programs (Gallo & Montagnier, 1988; Fineberg, 1988a, 1988b), but these are extremely costly and it will be a while before they can be implemented. Increases in levels of awareness that have not lead to noticeable changes of behavior suggest limitations in large scale public education approaches (Abramson, 1988). This, coupled with the tremendous financial cost, has lead to an increase in community network based campaigns (Dowdle,1988). Initially these focused on the counseling of those directly or indirectly affected by the AIDS menace, but they have been increasingly involved in education and prevention. At the community level, street workers are attempting to protect drug users from HIV by showing them how to clean their needles and syringes with dilute bleach solution (Fineberg, 1988a). Similar attempts have been made elsewhere (Nichols, 1989).

Attitudes Towards AIDS and Prevention

Some attitudes towards AIDS may be relevant to AIDS prevention. For example, if individuals were to believe AIDS was solely a homosexual disease this might hinder the adoption of widespread safer practices and responsible behaviors. Conservative church spokesmen and television evangelists have maintained that AIDS is God's punishment of homosexuals and IV drug users (Hallman, 1989). Such views may undermine educational efforts. DiClemente and Forrest (1987) claim that the use of recreational drugs and alcohol is related to an increase in the likelihood of unplanned

sexual encounters. This is, in turn, associated with unsafe sexual activities and a decrease in condom use (Stall, 1988; Stall, McKusick & Lang, 1986; Siegal, Mesagno, Chen & Christ, 1989). King et al. (1988) maintain that abuse of drugs and alcohol impairs the ability of youths to make responsible decisions about protecting themselves and engaging in sexual activities. Keeling (1987) argued that many young people take unwarranted risks because they are convinced that the consequences "can't happen to me". Such attitudes clearly would be detrimental to any attempts to prevent AIDS through education or behavior change. U.S. research indicates that there is a high correlation between the possession of accurate information and intolerant attitudes (Spurgeon, 1988).

Legislation exists in at least forty countries at this present moment enabling legal steps to be taken against those who have the disease and knowingly transmit it (Fluss, 1988). This is a reasonable and morally justifiable measure. Other suggestions that deal with the problem of AIDS include the mandatory screening of those about to get married (Fineberg, 1988a, 1988b), and a host of ideas related to mandatory AIDS testing, quarantining, notification and tracing of those exposed to the virus and so on. These are less justifiable and often impractical (Chin, 1988; Fineberg, 1988a). The conservative writer, William F. Buckley, proposed in the New York Times in 1986, that those detected with AIDS should be tattooed in the upper forearm and on the buttocks (Spurgeon, 1988). Moral reprobation and even punishment of promiscuity, prostitution and homosexuality and prohibition of employment of AIDS victims have been advocated by certain individuals and groups. Such attitudes are of social relevance and such responses to AIDS threaten central libertarian values and individual rights (Canada, Youth and AIDS Study, 1988).

In 1987, Ronald Reagan urged that states in the U. S. A. offer routine testing for those who seek marriage licenses, called for the mandatory testing of federal

prisoners, and announced plans to add AIDS to the list of contagious diseases that can form the grounds for refusing immigrants and aliens entry into the United States (Boffey, 1987). That such measures would prove efficacious in the fight against AIDS is highly questionable. Cleary et al. (1987) estimated that premarital screening in the United States would detect fewer than 0.1% of those infected with HIV. It would cost over 100 million dollars. In addition, the number of false positive results that emerge in screening populations, with a low prevalence of infection could be as high as 1 in 1250 (Cleary et al.). The medical and social costs of such statistics are immeasurable. Nichols (1989) and Rothstein (1987) are vehement in their opposition to mandatory screening of any kind. Their objections center, not only around the legality and ethics involved, but also concern the limited practical benefit that is obtained. They stress that the costs would far outweigh the benefits. Quarantining hundreds of thousands of people is not pragmatic, nor indeed logistically possible.

Spurgeon (1988) wisely points out that legislation that infringes too far on personal rights and freedoms, or is too restrictive, may produce effects opposite to those desired. If individuals are treated with compassion this would not happen. The Royal Society of Canada (1988) warns that scapegoating is a well understood social and cultural phenomenon. This is particularly true where diseases are involved (Porter, 1986). The Royal Society of Canada notes that "the danger is that it could become enshrined in law if Canadians attempt to deal with the epidemic by using such institutional systems as public health, immigration, education or justice" (p. 23).

Sadly, people do advocate such practices without consideration for their validity or efficacy. Whether this is a result of ignorance, fear, or prejudice is impossible to say. In a study of 437 randomly selected adults in Georgia, 22% of the people stated they would quit their jobs rather than work with an AIDS victim; 44% believed the

best way to get rid of AIDS was to get rid of homosexuality; 42% believed that people with AIDS should be prohibited from the workplace and 22% believed you could get AIDS from casual contact (Sikes, 1988). A Gallup Poll conducted in Los Angeles found that 34% of the people polled avoided contact with people they thought were homosexuals because of fear of AIDS (Garrett, 1988).

Weeks (1986), a British writer applying the influential sociological theory of "moral panics" for the purpose of explanation and analysis, states:

> The mechanisms of a moral panic are well known: the definition of a threat in a particular event (a youthful "riot"; a sexual scandal); the stereotyping of the main characters in the mass media as particular species of monsters (the prostitute as 'fallen women', the pedophiliac as 'child molester'); the spiralling escalation of the perceived threat, leading to the taking up of absolutist positions and the manning of the moral barricades; the emergence of an imaginary solution: in tougher laws, moral isolation, a symbolic court action. (in Altman, 1986, p. 187)

Illiberal approaches might prove ineffective, even counter productive. As Altman (1986) says "AIDS requires political will, public education and rational thought, not appeals to fear and hatred" (p. 194). Sontag (1983) comments "nothing is more punitive than to give a disease a meaning - invariably a moralistic one" (p. 62). There is little need to belabor the point that attitudes to AIDS are of profound social relevance. AIDS is an issue that cannot be divorced from social and political realities (Fineberg, 1988a). It is a value laden and emotive issue. In North America and Europe minority groups, such as intravenous drug users and homosexuals, already prejudiced against and stigmatized, have borne the brunt of the disease. Intravenous drug use predominates in communities rife with unemployment, homelessness, prostitution and crime. Concomitantly, such communities are

predominantly of racial groups other than white. Social conditions are so closely interrelated that the basic structure of a society that brings about such conditions has to be changed (Gallo & Montagnier, 1988; Fineberg). Mosher (1990), distinguishing between being moral and moralistic, argues cogently that moralistic intolerance will prove utterly ineffectual in controlling sexual behaviors and expression, but will lead to "stigmatization and criminalization of people who engage in private consenting sexual conduct" (p. 503). Mosher argues for responsibility in making sexual choices that fosters "self-respect", "informed consent" and "sexual freedom of choice" (p. 508).

Homosexuality has long since had to run the gauntlet of intolerance and prejudice, but this had been changing. In 1973 the American Psychiatric Association declared homosexuality was not to be considered a psychiatric illness and the Canadian Psychiatric Association does not recognize it as a mental disorder, provided it is a preferred behavior (King et al., 1988). Ironically, strides towards greater tolerance that had been made in the late seventies have disappeared with the advent of AIDS. Morgentau (1983) noted that a Newsweek poll reflected a decline in people prepared to accept the gay life style after hearing about AIDS.

Larson, Elder, and Ommundsen (1988) found support for the relationship of attitudes towards AIDS victims and other minority groups suggesting an underlying prejudice or ethnocentrism. It is possible that racial discrimination and homophobia, prejudice and hatred could burgeon as an irrational and desperate means of coping with the problem (Fineberg, 1988b). Rational and compassionate attitudes are essential to the successful resolution of the problem. So too, is co-operation and understanding at individual, community, national and international levels. These factors are emphasized by a number of scientists (Gallo & Montagnier, 1988; Fineberg, 1988a).

Fineberg notes:

> Our world has been made a different place by the human immunodeficiency virus. More profoundly our society is being shaped by our response to the epidemic. Will AIDS enhance understanding and tolerance of different sexual orientations, or will it harden traditional norms of acceptable and deviant sexual behavior? Will AIDS be perceived as a universal threat to all humanity, or will it be regarded as a problem of the underclass, the poor and uneducated, and the minorities? Will AIDS heighten the tension between moralistic and pragmatic approaches to behavior and health, or can solutions be found that are both effective and morally acceptable? Will AIDS evoke the selfless dedication of physicians, nurses and other health professionals, or will caregivers shun AIDS patients and seek other ways to practice their craft? How we choose to answer such questions, and the society we thus shape, is up to us. (1988a, p. 134)

Different patterns of transmission and epidemiology vary across nations and the world (Mann et al.,1988). Education strategies must reflect this. Information alone will not necessarily be enough (Nichols, 1989). Constant reinforcement and a social environment supportive of new attitudes about sex and drug use are required (Fineberg, 1988b).

Methodological Issues in Sex Related Research

Several methodological problems arise in sex research. Most sex studies employ non-probability samples (e.g., students, those seeking contraceptive or medical services). This is acceptable, provided one is cautious about generalizing the findings to other groups (McKinney, 1986). Ward (1986) also concedes that the "empirical foundations of modern political and social thought would become emaciated

if all studies based on captive student audiences were excluded arbitrarily from consideration" (p. 144).

Some allege that non-response (refusal to take part in a study and refusal to answer some questions) is a special problem in sex research. However, Johnson and DeLameter (1976) present evidence that in North America response rates in sex research are similar to response rates in other questionnaire research. They believe that researchers overestimate response effects in sex research and exaggerate the threat that sex questions engender. Evidence suggests that when a topic deals with sensitive issues, respondents tend to give more accurate and/or socially acceptable responses on self-administered questionnaires than in interviews (Edwards, 1957; Ehrmann, 1959; Fuller, 1974; Metzner & Mann,1952; Sorensen, 1972; Wiseman, 1972). DeLameter and McKinney (1982) conclude that less than 10% of North American adults refuse to answer questions on sexuality. Siegal and Bauman (1986) point out that the 1980's have been characterized by considerable openness about sexual lifestyles and practices and this they feel may have led to the desensitization of a number of people.

The reliance of research on sexual activity on self-report information is total and unavoidable. The question of the accuracy of this data is of the utmost importance. Self-administered questionnaires are economical and ensure anonymity, which is essential in a study of this nature. Threats of bias resulting from interviewer attitudes and actions are reduced (Siegal & Bauman, 1986). Evidence shows that different research strategies (interview vs. self administered), position of sex items in questionnaire, order of questions, and the terminology used, has little effect on responses (DeLameter, 1974; DeLameter & MacCorquordale, 1975; McKinney, 1986). Validity checks include consideration of the manner in which the questionnaire is completed, correlation of responses with social desirability measure

or tendencies, reported difficulty with questions, reported affront with questions, and participants' overall responses to the exercises. The best check, however, is provided by replication. If the study is partly original, the extent to which answers to unoriginal questions accord with existing data provides some check on the accuracy of all answers. This study thus employs a combination of measures that have been extensively validated and newly constructed instruments.

The Person-Situation Debate

Integral to this thesis is an issue that, according to Peake (1984), lies at the core of the discipline of personality psychology and generally falls under the rubric of the person-situation debate. The two contrary points of the debate can be traced back to the early 20th century with Windelbad's 1904 distinction between nomothetic and ideographic, in psychology (Peake). This conceptualization was adopted in Allport's trait theory (1937). Cattell (1965, 1973) defined personality in terms of prediction of behavior. Peake notes that the defining features of the personological approach is "a reliance on global response dispositions as the primary units in the analysis of personality" (p. 332). Implicit to this paradigm is the assumption that personality traits tend to be sufficiently stable over time and able to be generalized across situations in order to facilitate the prediction and understanding of behavior (Peake).

Opponents of this viewpoint maintain that using trait based methods of assessing behavior cannot be sufficiently generalized to warrant their use as an assessment device. Behavior within a particular trait domain cannot be generalized and thus the proponents of this framework cite a number of studies demonstrating what Hartshorne and May (1928) had labelled over fifty years previously "the doctrine of specificity". Most prominent within this school of thought within recent years has

been Mischel (1968). Empirical evidence for either point of view has been far from conclusive and the methodologies of each cannot be divorced from their theoretical underpinnings. Personologists have traditionally relied upon correlational research to prove their point, although situationists have relied almost exclusively on the use of the Analysis of Variance (ANOVA) paradigm to prove theirs (Hyland, 1984; Peake, 1984). These have been criticized and charged to be invalid (Alker, 1977; Golding, 1975). Even if one accepts their validity, the results are in general contradictory (Mischel 1973). The issue too, is confounded by interpretive differences (Pervin, 1984). Block (1977), Olweus (1977), and Epstein (1979), however, report on numerous well-designed investigations that support the position that behavior is constant and stable, suggesting that a significant proportion of behavioral variance is due to personality. Epstein maintains that it is unreasonable to accuse personality theorists of trying to explain all behavior. Kelly (1955) and Murray (1938) concede the limited range and applicability of their theories. No theory can anticipate and explain all variability. Allport (1937) argued that some problems of individuality completely elude the experimental method, but Epstein notes:

> There is enough cross-situational consistency in everyday life so that useful statements about individual behavior can be made without having to specify the eliciting situation. This is, of course, the way a trait is usually defined and the findings demonstrate the utility of such a concept. (1979, p. 1122)

When addressing the issue of stability in personality Epstein (1979) asks the question "How stable is stable?" (p. 1123). Hyland (1984) notes that there is no absolute answer to this question as "it depends on the assumptions about the sort of explanations held to be worthwhile. In particular, it depends on the degree of predictive power (Popper, 1963) thought necessary for a useful theory" (p. 310). Cognitive psychologists can account for generality and specificity in functioning, but

with the concomitant danger of reification of cognitive processes (Pervin, 1984). Affect and motivation tend to be ignored. All factors need to be taken into account. Millon (1981) and Millon and Everly (1985) argue coherently and powerfully for stability and predictability in personality.

Attitudes

Allport (1967) defined attitude as "a mental and neural state of readiness organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related" (p. 219). According to Zimbardo and Ebbeson (1969), this definition is limited in that it implies that attitudes are internal states which affect behavior, but it is not made clear how this control is exerted. Thurstone (1928) maintained attitudes were measurable, multidimensional and reflected affect for or against an attitude object. Zimbardo and Ebbeson maintain that "attitudes have generally been regarded as either mental readiness or implicit predispositions which exert some general and consistent influence on a fairly large class of evaluative responses" and are aimed toward some object, person or group (p. 6). They are general, learned, and enduring, but are considered to be amenable to change. These definitions emphasize the aspect of readiness to respond and the role of learning in the establishment and organization of attitudes, but fail, as Himmelfarb and Eagly (1974) point out, to differentiate attitudes from habits or other acquired behavioral characteristics. The motivational and affective character of attitudes have been emphasized by a number of researchers.

Attitudes are not directly observable, but are inferred and generally are accorded the status of an intervening variable (Himmelfarb and Eagly, 1974). This suggests that a number of covarying responses are connected through a single construct. Since Smith (1947), the concept of attitudes has been generally divided

into three components; affect (feeling), cognition (thought), and behavior (Breckler, 1984). Katz and Stotland (1959) developed this conceptualization most systematically, according to Himmelfarb and Eagly. The first component has been considered the dominant conception and has been conceptualized as a person's evaluation of, liking of, or emotional response to some object or person (Himmelfarb & Eagly). Such an evaluation may vary in intensity. The cognitive component involves a person's beliefs about, or factual knowledge of, an attitude object or person. Cognitions that are independent of the affective component tend to be regarded as beliefs or judgements (Himmelfarb & Eagly). The behavior component consists of the person's overt behavior directed towards a person or object. Katz and Stotland visualized an attitude as necessarily comprising an affective and cognitive component, but only having a behavioral component if the individual engaged in action related to the attitude object. Rosenberg and Howland (1960) include verbal statements made about behavior in this category.

It was believed that this conception of attitudes, as consisting of three components, suggests some methods of changing as well as measuring attitudes because an approach that deals with more than one component would be more efficacious (Zimbardo & Ebbeson, 1969). It is ordinarily assumed that components of the tripartite model display some degree of positive correlation, although this is by no means automatic (Breckler, 1984).

Such a conceptualization was not without its critics, who noted the problems of differentiating between the various components (Fishbein, 1967; McGuire, 1967). Moreover, Greenwald (1982) and Zajonc (1980) emphasize that the components may operate either in partial or complete independence. Attitudes have also been conceptualized as consisting of only one dimension and in many cases no clear empirical support has been found for either model (Breckler, 1984). Breckler

states that factor analysis and covariance structure analysis can be used to investigate these conceptualizations and provides evidence that supports the tripartite model.

Those falling in similar categories on the basis of measured similarities in either attitudes, personality, or traits are hypothesized to respond in the same general manner towards certain classes of stimuli. Altemeyer (1981) notes that an orientation to respond is not necessarily the same thing as a response. The issue of whether attitude measurement predicts behavior well enough to be scientifically useful has been discussed (Brigham, 1971; Fishbein, 1966, 1967; Kelman, 1974; Wicker, 1969). This debate in many ways parallels the person-situation debate already discussed. Resolution of the debate is not easy, but the overall picture boils down to the point that many of the conclusions reached in the person-situation debate are equally pertinent and germane to this issue. Altemeyer also points out that many authoritarian behaviors are themselves attitudes directed towards others (p. 148). Predictability does exist between attitudes and behaviors (Himmelfarb & Eagly, 1974).

With regard to sexuality, the historical assumption has been that women's attitudes were more conservative than men (Hendrick & Hendrick, 1987). This belief has been shifting over the past two decades, according to Hendrick and Hendrick. Many researchers report that male and female attitudes are converging (DeLameter & MacCorquadale, 1979; Talone, Ferrell & Walsh, 1977; Hopkins, 1977; Singh, 1980; Sprecher, McKinney, & Orbuch,1987; Sprecher, McKinney, Walsh & Anderson, 1988). This is possibly due to the concomitant consensus concerning the nonexistence of psychological sex differences that began to emerge in the writings of research psychologists in the mid-1970's (Eagly, 1985). Recent research work in the area of sexuality, however, does not necessarily support the

view that attitudes are necessarily converging (Hendrick & Hendrick; Mercer & Kohn, 1979; Robinson & Jedlicka, 1982).

The Erotophobia-Erotophilia Personality Dimension

Erotphobia-erotophilia and the Sexual Behavior Sequence

The Sexual Behavior Sequence (Byrne, 1977, 1983; Byrne & Byrne, 1977; Fisher, 1986) assumes that during socialization persons acquire certain response dispositions that govern sexual behavior. First, people learn generalized emotional responses to a variety of sexual cues. Second, people acquire informational responses (beliefs and expectancies) that are relevant to sexual behavior. Finally, individuals learn imagery based fantasy responses to sexual stimuli. A person's sexual behavior is determined by affective, informational and fantasy responses to relevant sexual stimuli. The person behaves as a result of a series of learned response dispositions, which may be initiated by external stimulation and internal processes. Ultimately, these affective, informational and imaginal dispositions are assumed to function as traits in terms of generality, persistence, and consistency. Such a conceptualization is not inconsistent with the tricomponential model of attitudes introduced earlier. The rationale of measuring each theoretical element was thus generated out of a desire to test the model and examine its efficacy as a means of predicting various sexual behaviors (Fisher et al., 1988). Whereas extreme erotophobes experience negative responses (e.g., guilt, anxiety, denial) toward sexuality, extreme erotophiles experience positive responses (e.g., interest, pleasure, acceptance) toward sexuality (Fisher, 1986). Erotophobes should, according to Fisher et al., show generalized avoidance responses to sexual cues. On the other hand, erotophilic persons should show generalized approach tendencies to sex. Each individual falls at some point along the erotophobia-erotophilia personality dimension (Baron & Byrne, 1986; Fisher,

1986). White, Fisher, Byrne and Kingma (1977) constructed the Sexual Opinion Survey to measure erotophobia-erotophilia.

Erotophobia-erotophilia and Sex-related Health Behavior

Various aspects of sex-related health care behavior should also be related to this dimension (Fisher et al.). Erotophilic individuals have been found to be more likely to engage in breast self-examination, to visit a gynecologist more regularly and to engage in certain preventive behaviors with respect to sexually transmitted diseases (Fisher, Byrne & White, 1983; Yarber & Fisher, 1983). Research has shown that individual differences in erotophobia-erotophilia predict differences in several sex-related areas that may be relevant to AIDS. These include sex and contraceptive knowledge, sexual behavior, contraceptive use, attitudes to sexuality and responses to health education (Allgeier, 1978).

It is also suggested that erotophobes have more difficulty learning sexual material than do erotophilic subjects (Becker & Byrne, 1985; Byrne, 1983; Morokoff, 1985). Gerrard and Reis (1989) maintain that literature has consistently indicated that erotophobic individuals, even when provided with information about effective means of contraception, tend not to practice birth control consistently or effectively. Fineberg (1988a) notes that people can often correctly answer information about AIDS, but this does not bring about behavior change.

Fisher et al. (1983) found that erotophobes performed less well than erotophiles in a human sexuality course examination, but did equally well in nonsex course examinations. In an undergraduate course in human sexuality, Fisher (1980) found that students who fell into the erotophobic category did less well than erotophiles in the midterm exam. Statistical significance was maintained even after past levels of performance were controlled for through analysis of covariance.

However there is, as yet, little direct evidence concerning erotophobia-erotophilia and health education on AIDS.

Schwartz (1973) reported that erotophobes were more likely to convey sexual misinformation to others in a role play situation. Evidence suggests that erotophobes are less knowledgeable about sexuality and contraception. It is important to ascertain whether this finding generalizes to AIDS knowledge. The effective use of contraception has been described as involving the performance of five discrete acts: learning about sex and contraception; anticipating the act of intercourse; acquiring contraceptives; discussing contraceptive use with a partner; and the consistent use of an effective contraceptive. The erotophobia-erotophilia personality dimension is integral to each (Byrne, 1983).

Erotophobia-erotophilia and Sexual Activity

Several studies show that erotophobes are less sexually experienced than erotophiles (Fisher, 1978; Gerrard, 1982; Gerrard & Gibbons, 1982; Langston, 1973; Lewis, Gibbons & Gerrard, 1986; Mosher & Cross, 1971). However, the focus of these studies reflect their concern with unplanned pregnancy, where multiple coitus with one partner is almost as problematic as coitus with several partners. If erotophobia-erotophilia is to predict sexual behavior pertinent to AIDS, it must be shown to be related to such sexual practices as coitus with multiple partners, with prostitutes and anal intercourse, although this aspect of the erotophobia-erotophilia dimension is beyond the scope of this present study. The relationship between sexual decision making and religiosity is documented (Juhasz & Sonnenshein-Schneider, 1987). They note that more religious individuals were less influenced by hedonistic self gratification through sexual intercourse and, conversely, the opposite applied to the less religious. This study does not explicitly examine the independent role and influence of religion. However, making a

distinction between correlates of religiosity and personality tends to reify the concept of personality and "implies that it is somewhat other than what is influenced by the sociocultural environment" (Goldstein & Blackman, 1978, p.25). The importance of religion is not denied, but it is seen as an implicit component of personality itself. Personality is conceived of as an enduring set of behaviors and attitudes developed by genetic and sociocultural influences, as Goldstein and Blackman suggest.

Erotophobia-erotophilia and Contraception

Evidence links erotophobia-erotophilia to attitudes towards contraception, exchange of information about sexual matters, the likelihood of undertaking public actions to secure contraception and to consistent and effective contraception (Fisher et al., 1988). Fisher et al. reported that erotophobic females believed that contraceptive clinic personnel were unwilling to dispense contraceptives to single individuals and that their partners, family and friends would disapprove of their use of contraception. Fisher et al. (1979) found that erotophobic women, relative to erotophilic ones, believed contraception to be unnatural, unromantic, unreliable and immoral, to result in guilt, to reduce sexual pleasure and to have negative side effects. Przybyla (1979) reported that erotophobic, as opposed to erotophilic, men believed that contraception caused guilt and reduced pleasure. Allgeier, Przybyla and Rywick (1979) found a relationship between contraceptive use and sex guilt. Evidence also suggests that erotophobia is related to the belief that contraception promotes promiscuity (Marindo, 1986). Brown (1977), Cobliner, Schulman and Romney (1973), Fisher (1980, 1984), Gerrard (1977, 1982), Grunebaum and Abernathy (1974), Lehfeldt (1971), and Rader, Bekker, Brown and Richardt (1978) found that erotophobes used contraception less consistently than erotophiles. Gerrard (1982) reported that erotophobes use less effective forms of contraception than erotophiles. Moreover, sexually active erotophobic females were reportedly

more likely to conceive than sexually active erotophilic women (Gerrard, 1982). Erotophobia-erotophilia may predict several important facets of the contraceptive process. Concerning AIDS, however, research should focus on attitudes to barrier contraception, in relation to coitus with several partners.

Fisher, Miller, Byrne and White (1980) asked some students to read a sexual speech and others to read a nonsexual speech. Erotophobes gave negative self-evaluations for the sexual speech, but not for the nonsexual speech. Erotophiles gave positive evaluations for sexual and nonsexual speeches. Yarber and McCabe (1985) found that erotophobic instructors were more likely than erotophilic instructors to omit birth control lectures from health education courses. Any similar reticence to exchange information on contraception among partners may inhibit the use of contraception (Allgeier, 1983). Catania et al. (1989) found condom use was associated with communication skills in adolescents. Polit-0' Hara and Kahn (1985) reported similar findings. King et al. (1988) stresses the importance of this issue. Fisher et al. (1979) found that erotophobes were less likely to use the contraceptive services of a health clinic for students. Field research by Fisher, Fisher and Byrne (1977) showed that erotophobic, as opposed to erotophilic, males who were required to buy condoms, experienced negative emotions about the purchase and felt that the vendor disapproved of them.

Kegeles, Adler and Irwin (1988) found that adolescent girls were uncertain about their partners desires regarding condom use when, in reality, adolescent boys were quite positive about using them. This suggests that misperceptions about a partner's willingness to use condoms may inhibit safe-sex practices.

Erotophobia has been linked to negative and illiberal attitudes to sexuality (Fisher, 1983). Erotophobes, relative to erotophiles, disapprove of premarital sex, advocate censorship of erotic films and literature, and support legal measures against

homosexuality (Fisher). Erotophobic, versus erotophilic, women offering sexual advice in a role play situation showed significantly greater moral disapproval of those reporting sexual activity (Mendelsohn & Mosher, 1979). Irwin and Thompson (1977) found an association between erotophobia and moral judgements about homosexual acts. Finally, Cherry and Byrne (1977) and Fisher et al. (1988) report a positive correlation between erotophobia and authoritarianism, a construct that includes illiberal sexual attitudes. Illiberal and punitive responses to AIDS have been widely advocated. The above evidence suggests that erotophobia-erotophilia may predict several important attitudes relevant to AIDS.

To belabor the point, campaigns against unplanned contraception and AIDS aim to change behavior (to reduce casual sex or promote protected sex). That the erotophobia-erotophilia personality dimension can contribute to effective behavior change is demonstrated by Gerrard (1982). Single sexually active college women who used contraception inconsistently were studied. One group received contraceptive information plus cognitive intervention to eradicate erotophobic beliefs about contraception. Another group received contraception information alone. A control group received neither contraceptive information nor cognitive intervention. Those receiving contraceptive information and cognitive intervention demonstrated the greatest behavior change (as measured by reported contraceptive use three months after the study).

Behavioral research indicates successful intervention programs must provide individuals with the social skills necessary to communicate AIDS-related concerns to their peers. Nichols (1989) maintains it is not enough to merely to alter individual perceptions about personal vulnerability.

Authoritarianism

Introduction to The Authoritarian Personality

The conceptualization and framework of authoritarianism owes much to the seminal work of Adorno, Frenkel-Brunswik, Levinson and Sanford (1950). Published in 1950, "The Authoritarian Personality" was the culmination of initial attempts to identify personality types that would be predisposed towards anti-semitism. Their work was thoroughly grounded in the psychoanalytic tradition. The researchers, by their own admission, relied heavily on the work of Freud and, in particular, the concept of the id, the ego, and the superego in personality formation. They believed that psychological needs were inextricably woven into personality trends. These, in turn, affect the susceptibility of an individual to organization of ideas, attitudes, values and beliefs into particular broader ideological frameworks. A person's thoughts, values and beliefs are organized into a structure that need not necessarily be integrated, but relate in a meaningful way to determine ideological preferences.

Their work was not, however, without precedents. As early as 1936, Stagner (1936a, 1936b) was involving himself in the study of similar and related topics such as stereotyping, imperialism, militarism, and racial antagonism. Edwards (1941) pursued similar interests (McKinney,1973, p.44). In 1941, Fromm addressed himself to the task of analyzing the "dynamic factors in the character structure of man, which made him want to give up freedom in Fascist countries" (p. 6). A basis for the authoritarian personality could, according to Fromm, be found in the dynamic constructs of sadistic and masochistic strivings. Central to this thesis was a need in people for submission and domination, power and powerlessness. In 1943, Maslow, stimulated by the work of Fromm, published a study attributing a number of characteristics to the authoritarian person. These included the tendency to

hierarchy, the generalization of superiority-inferiority, a drive for power, hostility, hatred and prejudice, strong feelings of guilt and a sado-masochistic tendency.

Adorno et al. (1950) suggested that correlates between ideological and sociological factors acted upon potentials within personality, upon readiness for behavior or upon predispositions towards particular modes of behavior. Such factors are regarded as stable and more or less enduring (Byrne, 1977). Another facet to emerge from their studies was the fact that they felt the authoritarian personality exhibited psychological pathology or disturbances. Central to this hypothesis is the belief the authoritarian personality is plagued by unresolved Oedipal conflicts (Adorno et al.; Byrne; Wrightsman & Deaux, 1981; Stagner, 1974). Adorno et al. conceptualize the authoritarian personality in terms of nine traits: conventionalism; submission; aggression; anti-intraception; submission; power orientation; cynicism; projection; and excessive fixation on sexuality (Wrightsman & Deux; Van IJzendoorn, 1989). They set out to measure such personality traits, utilizing questionnaire and clinical depth techniques.

Since its publication "The Authoritarian Personality" has come in for enormously detailed examination, evaluation, and ultimately devastating criticism. Van IJzendoorn (1989) estimated that more than 1200 studies on the authoritarian personality have been reported. This is probably a conservative figure. Kirscht (1967) claimed 'that Hyman and Sheatsley (1954) all but demolished the work with their incisive critique' (p. 7). They focused on methodology, populations studied, sampling method, measuring instruments and analysis in relation to the critical framework proposed by the original researchers concluding that "mistakes and limitations uniformly operate in favor of the authors' assumptions and cumulatively they build up a confirmation of the theory, which upon examination proves to be

spurious" (p.121). They concede that the theory may itself be supportable, but that the methodology was too flawed to achieve this (p. 121). Kirscht was equally scathing, maintaining that the study lacked a systematic theory and, due to criterion contamination, the information collected failed to support the results and thus the theory.

The F Scale and Response Set

One of the most important issues to arise from the criticisms of the methodology of Adorno et al. (1950) was that of the role of response bias in determining F Scale scores. General tendencies exist to agree, or answer true, on pencil and paper tests (Cronbach, 1946; Kirscht, 1967; Smith, 1950). Evidence regarding the effect of response bias in Adorno et al.'s work is far from conclusive, but researchers have generally focussed on two broad areas.

The first school of thought maintains that results of the F Scale are seriously contaminated by the "tendency to agree" and maintain the scale reflects acquiescence or "yeasaying" (Cohn, 1953; Couch & Keniston, 1960; Ray, 1984; Shelley, 1956). Items on the original scale are all written in the protrait (authoritarian) direction which compounds the problem. Bass (1955), Chapman and Campbell (1957), Jackson and Messick (1956), Lee and Warr (1969) and Peabody (1966) concur, noting that a relationship between F Scale scores and acquiescence has often been found. Zuckerman and Norton (1961) concluded that 36% of variance could be attributed to general authoritarianism and about 20% to a primary acquiescence factor.

The second school of thought regards the influence of response bias as insignificant (Rorer, 1965). According to van IJzendoorn (1989) "several different authors have shown the irrelevance of much of this criticism (Hagendoorn & Janssen, 1983; Meloen, 1983, Roe, 1972)" (p. 40).

Christie, Havel and Seidenberg (1958) reviewed a number of studies and came to the conclusion that response set was not a primary determinant of scores on the F Scale. On the basis of a number of theoretical and empirical factors, Samuelson and Yates (1967) concluded that there is little evidence of a serious acquiescence bias. They criticize the debate over acquiescence as a blind alley that had the unfortunate effect of reducing interest in authoritarianism. The issue of response set or bias has not successfully been resolved - indeed authoritarian submission may be an integral part of authoritarianism and such a response bias may indicate authoritarianism, logically and psychologically (Gage, Leavitt & Stone, 1957; Gage & Chattergee, 1960; Leavitt, Hax & Rochee, 1955). Schroder, Driver and Streufert (1967) maintain that acquiescence to a salient norm is a characteristic of integratively simple persons. This is a concept not unrelated to authoritarianism.

Efforts have been made to reword the F Scale and include some negative items, but these have not been entirely acceptable (Byrne 1977, 1974; Kirscht 1967). Christie, Havel and Seidenberg (1958) object to the practice of reversing F Scale items. They note that logical opposition in content does not necessarily involve psychological opposition. Brown and Datta (1959) found that response set played a relatively minor role in F Scale scores. Brown (1965) felt it was not possible to write items that were perfect negatives. Zuckerman and Eisen (1962) found scores on an acquiescence-free test of authoritarianism correlated highly with the F Scale. Ray (1972) found a nonsignificant negative correlation between an acquiescence measure and a short F Scale.

Perhaps the only real conclusion is that the argument about response bias cannot presently be satisfactorily resolved one way or the other. Caution needs to be exercised in evaluating any research undertaken with the original F Scale, but the scale itself cannot be considered invalid on these grounds alone. Byrne and Kelley

(1981) point out that when the F Scale is confounded with acquiescence response set, correlations between it and other tests may be a function of an actual relationship between authoritarianism and another variable or an artifact caused by the common element of acquiescence. Duckitt (1989) notes that early attempts to demonstrate acquiescence on the F Scale were not "unambiguously successful" and that "the debate over this issue ended inconclusively during the mid-sixties" (p. 65).

The influence of social desirability response set has also been raised. This involves the systematic distortion of responses in order to appear socially desirable (Peabody, 1966; Kirscht, 1967). Rokeach (1960) concluded that this was not a problem.

The Validity of the F Scale

In the light of such devastating criticism, caution is required in evaluating Adorno et al.'s work. It does have merit in terms of its initial objectives and in the subsequent impact that it had on related schools of thought. That the methodology was flawed cannot be disputed, but it was an ambitious attempt to break new ground. The range of problems covered is wide and the description of research design and execution is rich in detail. Ironically, it is this formidable detail and comprehensive exposition that lends itself to profitable methodological analysis and concomitantly criticism. A lesser work would yield little. Even Hyman and Sheatsley (1954) concede that the study is a most "stimulating work", representing a "philosophy of research" that stems from a "well developed theory, a circumstance all too rare in social research" (p.51). They conclude that the marriage of hitherto separate research approaches of the quantitative statistical or survey method and the intensive clinical approach, culminated ultimately in what is recognizable as a "milestone in social research" (p.50).

Part of the difficulty in evaluating "The Authoritarian Personality" occurs as a result of misinterpretation. No systematic theory guided the research because it was constantly evolving and generating (Adorno et al., 1950). Moreover, the F Scale was developed to measure general prejudice, not specifically the authoritarian personality, and was "designed to tap prefascistic tendencies" (Adorno et al., 1950, p. 224). According to Christie (1954) the scale name was chosen to draw out the implications of earlier writings by Maslow and Stagner. Sanford (1956) confirms this.

Christie (1954) stated that the F Scale developed by Adorno et al. to tap "pre-fascistic tendencies" and not necessarily authoritarianism, does have face validity and does measure something. Christie and Garcia (1951) analyzed interitem correlations on the F Scale of two matched samples with the original hypothesized personality variables. Both samples consisted of university students. Cluster analysis on the performed on the tetrachoric intercorrelations indicated that certain items on the F Scale did hang together. It was noted that some items did not fall into any clusters. Even more significantly, individual items generally fell into different clusters in the two samples. Despite this, Christie and Garcia concluded that the "F Scale did capture something common to fascistic philosophy" and remarked that "the hypothesized dimensions did have some validity" (p. 140). Altemeyer (1981) notes, however, that cluster analysis is often unreliable when applied to small sample sizes and its reliance on tetrachoric correlation poses further problems.

More sophisticated factor analytic techniques have yielded ambiguous results. Krug (1961) analyzed the results of 704 questionnaires completed by university freshman. Krug obtained similar results using orthogonal rotations on Thurstone's multiple group method with graphic rotation to simple structure and a centroid extraction with an equamax rotation. The equamax rotation ultimately yielded a first

general factor. Krug derived six interpretable factors that coincide with trait names used by the original researchers, according to Kerlinger and Rokeach (1966). Krug claimed that a general factor emerged, which indicated that there existed some common variance in most of the F Scale items. Krug conceded that several dimensions were necessary to understand the overall scale, hence justifying the use of orthogonal rotations. However, item loadings are not high and the equamax rotation can exaggerate the importance of the first rotated factor (Harman, 1967).

Kerlinger and Rokeach (1966) performed a principal axis analysis on results obtained from over a thousand students and then rotated the matrix obliquely through a promax method. The results, according to Altemeyer (1981), were not reported in detail, but supplementary information researched indicated five factors were extracted and rotated. Although the original researchers did not name the factors, Altemeyer concedes that the first two factors together may have had "something to do with aggression, conventionalism and submission" (p. 24).

Bendig (1960) factor analyzed the F Scale and identified three first order correlated substraits, but admitted that more than three first order factors might exist. Bhusan (1982) maintained that two factors emerged after analysis and indicated that the theme of conventionalism best described the factors. Camillieri (1959) and O' Neill and Levinson (1954) felt the F Scale was multidimensional and that the clusters did share something in common. Altemeyer (1981) goes on to state that a number of investigations have suggested that at least some of the dimensions posited by Adorno et al. (1950) are represented, although the limitations of these relationships is emphasized.

Little evidence can be found supporting the unidimensionality of the scale. Eysenck (1954) reported that research collaborators, in carrying out a factor analysis of data provided by the original researchers, found a strong general factor

that ran through all the items. No details are given concerning the factor procedures used. In light of this, it is possible that the general factor in the unrotated matrix was misinterpreted as evidence of unidimensionality (Altemeyer, 1981). Comrey (1973) notes that this is not uncommon.

Bhusan (1982) reviewed research on authoritarianism published until 1978 with a focus on validity and concedes that the F Scale has suffered from methodological and procedural defects in its developmental stages and has not necessarily resolved the issue of response bias adequately. Bhusan notes that the theoretical constructs and assumptions of the scale have, to an extent, been verified. Most significant, however, is the observation that Bhusan makes in stating that the importance of the F Scale is indicated by the fact that psychologists generally have validated their tests against the F Scale - even those who are most critical of it. This is a point that even Altemeyer (1981, 1988) cannot deny.

Authoritarianism and Prejudice

Correlations are quite consistently found between measures of authoritarianism and prejudice (Ashmore and DelBoca, 1976; Kirscht and Dillehay, 1967). Adorno et al. (1950) found an average correlation of .73 between scores on the F Scale and a scale named the E Scale which they devised to measure prejudice. Methodological flaws such as response set, unidirectionality of wording and item contamination do confound the issue and suggest caution may be necessary in interpreting the results. Campbell and McCandless (1951) found a correlation of .73 between the F Scale and the E Scale and a correlation of between .42 to .57 between the F Scale and various measures of prejudice against minority groups. They developed a measure of Xenophobia that appeared free from potential acquiescence set.

Martin and Westie (1959) found that the mean F Scale scores of a group of tolerant people were significantly lower than scores of prejudiced people as

determined by a bipolar measure of prejudice. Triandis and Triandis (1960) found that scores on a social distance scale were much higher among individuals who fell in the upper half of a revised F Scale distribution and were considered more authoritarian. Hites and Kellog (1964) found a correlation of .55 between the F Scale and measures of prejudice, although again items were worded in the same direction. Kaufman (1957), McDill (1961), Roberts and Rokeach (1956) and Srole (1956), also found results that tend to be supportive of the validity of authoritarianism with regard to prejudice. The latter three researchers emphasized the importance of the concept of anomia (self-to-others alienation). Christie and Cook (1958) reviewed over 230 studies relating to the authoritarian personality and found consistency in many of the most intensively studied areas. They established that the F Scale significantly correlated in a wide area of samples and predictions of relations with attitudinal measures.

Authoritarianism and Attitudes Towards Sexuality

Hayes and Oziel (1976) and Ross (1975) demonstrated a relationship between authoritarianism and negative attitudes towards homosexuals. Larsen, Elder, Bader and Dougard (1990) maintain that attitudes towards AIDS victims are seen as part of a broader ethnocentric syndrome that correlated with attitudes towards Blacks and Jews. Attitudes towards AIDS victims were also correlated with a toughness factor represented by attitudes towards capital punishment. They report a significant Pearson correlation between scores on an attitudes towards AIDS scale and a shortened version of the F Scale.

Byrne, Cherry, Lamberth and Mitchell (1973) studied the reactions of 42 married couples to erotic stimuli. They found highly authoritarian couples were more sexually aroused, viewed more themes as pornographic and advocated greater restrictiveness of erotic stimuli than non-authoritarian couples. Authoritarians

tend to judge sexual themes in paintings as pornographic (Eliasberg & Stuart, 1961), overemphasize sexual attributes in their perception of females (Rothstein, 1960), project negative emotional reactions onto others and to repress threatening sexual referents to themselves (Griffitt, 1973). Kelley (1985) found differences in authoritarians in responses to explicit heterosexual and masturbatory slides. Greendlinger (1985) looked at authoritarianism as a means of predicting affective and evaluative responses to erotica among heterosexual college males and females. Highly authoritarian individuals were more erotophobic, more homophobic and tended to feel more sexually guilty and held more negative attitudes to masturbation than low authoritarians. Authoritarianism was a significant predictor of affective and evaluative responses to erotica that depicted unconventional sexuality. Gough (1973) found several heuristic patterns of covariation between personality and cognitive measures. These included the F Scale and the Miller-Fisk Sexual Knowledge Questionnaire.

Varela (1971) has shown how a consultant can use the assessment of the degree of authoritarianism of target individuals in designing persuasion situations. Individual's responses to AIDS education may be mediated by their levels of authoritarianism. A high status authority presentation may prove more effective on an authoritarian person (Oskamp, 1984).

The F Scale and Other Constructs and Measures

Rokeach (1960) emphasized the cognitive aspect in ethnic intolerance and maintained that it was based on identifying the degree to which groups were cognitively similar to oneself. Kirscht and Dillehay (1967) comment that this provides a way of "integrating the personality aspect of prejudice with the study of beliefs and attitudes in general" (p. 11). Stress, psychological and social, could intensify the effect. Rokeach developed the Dogmatism scale, or D scale, in an attempt

to measure a generalized construct of authoritarianism, and not just right wing authoritarianism. Rokeach conceived of dogmatism as being an organization of belief-disbelief systems that a person accepts as being either true or false according to the world they live in at a given time. The system consists of a series of subsystems rather than a single belief or disbelief. People display a need for a cognitive framework to know and to understand and a need to ward off threatening aspects of behavior. A belief system is open when the need to know predominates. Reality is perceived as non-threatening. However, when reality is considered threatening the system becomes closed. The need to know decreases and the individual confuses information and source, identifying with absolute authority figures and causes. This identification, according to Rokeach, can be anxiety reducing and prevents feelings of isolation.

Furthermore, Rokeach (1960) maintained that the belief system was organized along a central, immediate and peripheral dimension. Within the central region lies the person's primitive beliefs about himself, others and the physical world. The intermediate region relates to beliefs about the nature of authority, whilst the peripheral region deals with beliefs derived from authority. Beliefs can be isolated and differentiated. Isolation occurs due to a failure to see the relationship between intrinsically related beliefs. Differentiation refers to the articulation of beliefs within a system. Belief-disbelief systems are organized along a time-perspective ranging from past, present, and future. A realistic integration or broad time perspective, according to Rokeach, is central to the open-minded, whereas an over-emphasized, fixated or narrow time perspective is typical of the closed minded. A closed minded or high dogmatic person will view the world as threatening, authority is absolute and others can be measured in terms of their attitude to authority. Beliefs are isolated, fragmented and restricted to a narrow time perspective. The open

minded or low dogmatic person sees the world as non-threatening, does not rely upon absolute authority and is capable of seeing others in terms that are divorced from their relationship with authority. Beliefs are related and communicated within a broad time perspective.

Byrne (1977) commented that many studies have been conducted since the evolution of the D Scale relating it to a number of issues such as reactions to authority, prejudice and political belief, suggesting that it does measure a more generalized form of authoritarianism. Byrne concluded that research had generally substantiated the major hypothesis about dogmatism. This bears closer examination. Kirscht, in 1967 obtained a true correlation of .88 between F Scale and D Scale scores, indicating that the two scales are not as distinct as suggested. Evidence indicates considerable overlap in factorial structure. Moreover, scores on the D Scale have frequently been found to be higher among right wing political groups than among others (Barker, 1963; Direnzo, 1968; Kirtley & Harkless, 1969; Granberg & Corrigan, 1972; Thompson & Michel, 1972). The scale is not as free of political ideology as Rokeach intended. Significantly too, many of the criticisms that have been leveled at "The Authoritarian Personality" can be applied to the D Scale as well. Poor reliabilities are obtained even though the scale is relatively long. Factor analysis does not support the issue of unidimensionality and, most importantly, the complex theoretical model of dogmatism used to develop the items, is not discernible in any detail among intercorrelations on the test (Altemeyer, 1981). It is worded in one direction. Altemeyer also states that direction of wording and thus response bias have not been satisfactorily resolved (p. 90).

Kirscht (1967) maintains there are plausible explanations for many of Rokeach's findings, but doubts the the psychoanalytic framework of the scale developed by Adorno et al. (1950) can be translated into the cognitive perspective

that Rokeach formulated. This may be a valid point, but only if one accepts that both works were guided by their theoretical antecedents. It is doubtful that theoretical constructs permeate either scale in actuality. In addition, Kirscht questions whether "all expressions of authoritarianism can be subsumed under the more general expression of dogmatism" (p.12).

Schroder, Driver and Streufert (1967) assert that they have found "in general... less construct validity for the dogmatism scale than the F Scale" and conclude that the F Scale was a "better indicator of concreteness than is the dogmatism scale" (p. 132). The value of Rokeach's work lies in the emphasis of the structural aspects of cognitive functioning in contrast to manifest content. The extent, however, to which the D Scale reflects this is limited.

Altemeyer (1981) reviewed a number of scales that purported to measure authoritarianism. These included the original F Scale (Adorno et al., 1950), the Dogmatism Scale (Rokeach, 1960), the Conservatism Scale (Wilson & Paterson, 1968), the Balanced F Scale (Lee & Warr, 1969), the Authoritarianism Rebellion Scale (Kohn, 1972) and the Right Wing Authoritarian Scale (Altemeyer, 1981). As has been noted , Altemeyer intimates the scales that have adhered most closely to the classical model, generally tended to share the difficulties of the classical approach and even exacerbates them. Duckitt (1989) concurs. Altemeyer adopted an empirical

the responses to each test as a means of interpreting the major dimensions represented on each scale. Relationships with various measures were obtained through correlations with indices such as acceptance of acts by government, morality, punitiveness, aggression, acceptance of religious beliefs, and preferences for rightwing political parties. The sample consisted of approximately one thousand Canadian university students.

A few results are worth noting. Except for the Conservatism scale, the number of factors extracted was generally very low. The F Scale and the Right Wing Authoritarianism scale yielded only one factor. This cannot be taken as a reflection of unidimensionality when one considers the amounts of variance resolved. Not surprisingly too, Altemeyer (1981) claims the RWA Scale is the most unidimensional, maintaining that it overcomes the problem of response set, because the first factor contains protrait and contrait items. A caveat, however, when a second factor is forced from the scale's correlation matrix all of the protrait items loaded on varimax Factor I and contrait items loaded on Factor II. Also, at best, Altemeyer's scale resolves between 23% and 25% of the variance. Not necessarily a desirable situation. Altemeyer goes on to modestly and succinctly conclude that the Right Wing Authoritarian Scale "was the best measure of authoritarianism tested in the study" (p.204).

The F Scale - A Recapitulation

Altemeyer (1981) states that the "F Scale cannot measure what it was intended to measure" (p. 25). Duckitt (1989) is critical of this conclusion, pointing out that Altemeyer's own scale taps only three of the original nine traits introduced by Adorno et al. and that Altemeyer then proceeds to define authoritarianism in post hoc fashion as the "covariation of these three attitudinal clusters" (Altemeyer, 1981; p. 147-148). This definition, according to Duckitt, leaves a lot to be desired because the

RWA scale is not tapping attitudes, but more fundamental beliefs about values and norms. In addition, Duckitt feels that Altemeyer evades the issue of what underlying construct unifies the covariation of the three components mentioned earlier.

Another way of looking at this is to concede that the F Scale does have validity, but that the limitations of Adorno et al.'s work lay in an inability to adequately conceptualize authoritarianism through the nine trait model that they proposed. As Duckitt (1989) notes, generally, this is the position that psychological research tended to implicitly adopt. Little attempt was made to reinvestigate the nine trait model and develop new measures from the original conceptualization. Duckitt points out that the theoretical model tended to be ignored and the F Scale was adopted as an operational definition of authoritarianism. If one accepts that personality variables or traits can be obtained from attitudinal scales, a multivariate construct is attainable. Definitions can be drawn up from constructs, but this leads to complications that are not easily resolved. In addition, many people studied tend neither toward high authoritarianism nor low authoritarianism, falling within the midrange. Many response patterns, some vastly diverse, thus, have similar outcomes or achieve similar overall scores. Caution needs to be adopted in interpretation of results.

Duckitt (1989) feels "the consensus within mainstream psychology is that this concept has not proved particularly meaningful or useful for the understanding and explanation of human behavior" (p. 64). Duckitt maintains that this conclusion is not justified, but that a new approach may be necessary to resolve the problem. Duckitt emphasizes that the concept of authoritarianism has fundamental significance for the understanding of individual or group factors in the collective and intergroup behaviors.

Tentative conclusions can be made about the concept of authoritarianism. It is a complex multidimensional construct and not unidimensional as originally conceived. If one looks at the original conceptualization of the authoritarian personality it would be difficult to envisage a unidimensional model. Moreover, the issue of response set has not been satisfactorily resolved. Despite this, it does appear to have validity (Christie & Garcia, 1951). Part of the problem lies in the ease with which we can identify authoritarian behavior, yet not measure it. This may be indicative of the unrealistic expectations that are made about the construct as a whole. In adopting such a scale for research it is necessary to place specific limitations upon the conceptualization and utility of the instrument.

Duckitt (1989) posits that the underlying theme Altemeyer (1981) identifies is one that is "quite directly reflecting the intensity of the individual's emotional identification within a given social group" (p. 70). Group cohesion and the need for ingroup identification is emphasized. Individuals experience differing levels of emotional identification with various ingroups. According to Duckitt, the greater the ingroup identification, the greater the emphasis on behavioral and attitudinal conformity with ingroup norms and rules. This is referred to as conventionalism. Greater emphasis is placed on respect and obedience to in group leaders and authorities, which is referred to as authoritarian submission. Intolerance of and punitiveness towards those who do not conform to ingroup norms and rules increases as ingroup identification increases. This is authoritarian aggression. Anticipation of threat or competition increases the readiness with which groups and members establish centralized leadership.

Duckitt (1989) defines authoritarianism formally as "the individual or the group's conception of the relationship which should exist, that is, the appropriate or normative relationship between the group and its individual members" (p. 71). It is

explicitly stated that this conceptualization is a dimension with two extremes, authoritarianism and libertarianism. This is in contrast to the classical conceptualization, which focussed only on the authoritarian extreme. This viewpoint presents authoritarianism in terms of a normative belief system, which is expressed most directly as prescriptive beliefs, although Duckitt stresses that this does not mean such authoritarian beliefs could not be expressed in attitudes or values. Duckitt emphasizes that, because the F Scale is heavily weighted in item content towards statements of a prescriptive nature, it can be conceptualized in terms of either a personality variable or an attitudinal cluster. It is this conceptualization that is adopted as the most useful definition of authoritarianism for the parameters of this study.

Also of relevance to this thesis is the following statement made by Duckitt (1989): "When individual differences in authoritarianism as a generalized belief and assumptional system are measured then items should be formulated in a generalized manner and not tied to any specific group context" (p. 80). Altemeyer's (1981) RWA scale contains a number of items that refer specifically to the "government" - Altemeyer is more interested in the political ramifications of authoritarianism. A glance at Altemeyer's (1981, 1988) books makes this patently clear. The scale is limited in its applicability and is, as Duckitt notes, "tied so directly to the societal level specifically" (p. 80). For this reason it was considered inappropriate for this study.

Van IJzendoorn (1989) examines the relationship between authoritarianism and moral judgement and ethnocentricism. Adopting a classical conceptualization and considering only the superego elements such as conventionalism, submission and aggression, Van IJzendoorn found a negative correlation between authoritarianism and moral judgement levels and a positive correlation between authoritarianism and

ethnocentricism. Van IJzendoorn's conceptualization of moral reasoning is based on the developmental theories propounded by Piaget (1962, 1967, 1969) and Kohlberg (1981, 1984). Authoritarianism is interpreted as stagnation in the development of moral reasoning. Van IJzendoorn's conceptualization coincides in many ways with that put forward by Duckitt (1989) and to a lessor, but still significant degree, with that which Altemeyer (1981) claims to have derived from an empirical perspective. It is consistent with the findings related to the concept of anomia outlined earlier. In many ways the superego elements, by their very conceptualization, tend to be prescriptive. Van IJzendoorn notes that the much criticized complexity of the concept of authoritarianism is "thereby considerably reduced" (p. 39). This point is well taken and provides support for the conceptualization of the authoritarian personality used in this study.

Inevitably, one must answer the question why resuscitate the F Scale? Samuelson (1986), one of the original researchers, notes that the social behavior of the research subjects and the questions that investigators ask are affected by the course of history. Levinson and Sanford (1982) maintain that there is a rise in levels of authoritarianism that is similar to what they observed in the 1940's and revitalization of the F Scale is thus justified.

Meloen's (1983) study cited in Sanford (1986) supports this. Meloen examined all published studies using the F Scale during the period 1950 - 1980 and was able to show that F Scale scores varied with the political, social and economic processes at work in a number of countries. Thirty thousand American subjects and 15,000 subjects in 23 other countries were involved. Meloen found that in America there was an upward swing in authoritarianism during the 1950's, a sharp decrease in the 1960's and then an upward trend in the late 1970's. It is possible that such a trend still exists. Sales (1972, 1973) notes that a number of authoritarian

responses increased during historical periods that tend to be characterized by socioeconomic threats and political stress. One cannot deny that the specter of AIDS is stressful or threatening.

One final conceptualization of authoritarianism is worth considering. Situational constraints, social roles and a myriad of other variables impinge upon the human being and exert an influence throughout life, not merely during the critical formative years so important to the psychoanalytic school. In looking at the cognitive perspective the more global approach typified by the cognitive interactionists makes the most allowances for these and related factors.

Cognitive interactionists maintain certain domains of belief often serve as foci for the close-minded individual. These include sex, aggression, religion and politics. Suedfield (1983) refers to cognitive processes "as being modified and, in turn, modifying environmental factors". Authoritarian behavior is a "problem solving attempt to deal with the demands and pressures of circumstances" (p. 1). This approach enables attention to be paid to a wide range of available ideologies, cultural factors, societal factors, social factors within groups and even, if desired, genetic and constitutional factors. All factors contribute in some way to levels of authoritarian predispositions or susceptibility. The cognitive interactionist is primarily concerned with emergence of authoritarian behavior and with that behavior as it is manifested in leadership and followership activities. Janis (1972) showed how, under levels of stress, cognitive processes could become simplified, rigid, narrow and dependent on a limited source and type of information. The source of information could be a dramatic leader, movement or philosophy. Janis labeled this concept "groupthink". Thus, according to Suedfield, the cognitive interactionist perspective sees simplification and subsequent authoritarianism as a consequence of "such environmental parameters as information load, time available to process the

information, perceived payoffs, diversity of information sources and interpretations" (p. 7). Decisions are based upon ability to deal with information, flexibility and the nature of the decision making structure.

According to Suedfield (1983), authoritarianism does not "exist in an environmental vacuum" (p. 7). It can be a way of dealing with an environmental problem. As such, it may or may not be adaptive, adequate, or value laden. In some situations, simplicity, direction, and obedience may be optimal, in others debate, discussion, and compromise may be more effective. An important emphasis in this conceptualization is the fact that levels of knowledge may have a bearing on attitudes. Concerning the issue of AIDS, it has been consistently noted that attitudes, in the form of feelings towards homosexuality, tend to be related to levels of knowledge (King et al., 1988).

The cognitive interactionists criticize traditional methodology for their reliance on interviews and personality scales that are intrusive in nature and they focus their attention on use of archival analysis in conjunction with generally applicable scoring manuals derived from tests which have adequate reliability criteria such as the Paragraph Completion Test. The volume of research is limited, but it is growing with the development of more reliable, discerning and scientifically acceptable methodology. Promising results have been achieved by Sudanius and Ekehammer (1977), Kronheim (1977), and Ertel (1975). Analyses of the portrayal of "AIDS in the media" (Baker, 1986) and the responses of the press to the disease (Albert, 1986) reflect, to a large extent, related methodologies, which involve the use of content analysis.

Cognitive Complexity - Authoritarianism Redefined in Cognitive Terms

The most useful way to define authoritarianism appears to be in terms of cognitive style - closed minded cognitive functioning" (Kirscht, 1967, p. 133). The genuine authoritarian individual cannot cope with novel cognitive material or situations, becoming dependent on external authority for support of belief systems. Sets of beliefs and patterns of behavior mediate and maintain the cognitive style. Social reality has an impact on such style as well and sex, aggression, organizational and institutional areas serve as focal points for certain beliefs. This approach has antecedents in the work of cognitive psychologists like Lewin, Werner, Piaget, and Bruner. Development is seen as cognitive growth and an increase in the variety of ways an organism can relate items of information (Gardiner, 1968). Piaget saw cognitive development as a growth from concrete operations to formal operations or from simple to more complex or abstract (Anderson, 1968). Nor does one have to deny life experiences totally. Relationships do exist between personality variables and information processing theories according to Harvey, Hunt and Schroder (1961). Harvey, Hunt, and Schroder (1961) in "Conceptual Systems and Personality Organization" expand on this, maintaining that, as an individual develops, cognitive complexity increases. More dimensions and ways of putting things together intellectually are found. Individuals, according to Harvey, Hunt and Schroder, interact with the environment by reducing it to meaningful patterns congruent with psychological make up and needs. Perceptual and behaviorial constancies develop. Such evaluative tendencies are termed concepts, which provide the basis for understanding the joint effect of situational and dispositional factors. A concept can be a categorical schema, an intervening medium, or program through which stimuli

are presented prior to responding. Their focus is placed upon the organizational properties that are not restricted to any particular referent object, but might be directed towards any object. Concepts define the positive and negative quality of an event and this, sequentially, determines the affective arousal. The unifying construct between a number of complexity theories lies in the conceptualizations of differentiation and integration that is integral to a variety of cognitive structures. Bower (1969) regarded the term cognitive complexity to be essentially synonymous with Schroder's integrative complexity, Harvey's conceptual systems theory and Hunt's (1966) conceptual level (p. 7). The more dimensions available for differentiating stimuli and the greater the number of rules used to generate structures amongst these dimensions, the more complex a cognitive structure is (Harvey, 1966; Schroder, Driver & Streufert, 1967). Complexity is correlated with abstractness (Harvey).

Factors determining the level of concreteness-abstractedness are developmentally based and progress towards greater abstractedness. As a person develops, they order the world more realistically and less stereotypically. The most important structural characteristic is the degree of concreteness or abstractedness. In concrete functioning, a certain level of fixity is indicated and vice-versa. Such a conceptualization focuses on differential abilities in cognitive affective and behavioral consequences in situations that confirm or refute conceptual standards. "Specific behavioral manifestations are but genotypic evaluative orientations to the world" (Harvey, Hunt & Schroder, 1961, p. 17). Concepts structure the environment and are structured by it, emphasizing the importance of reciprocity in the process.

The most concrete level is referred to as System One. At this level, individual functioning is typically characterized by such behaviors as high absolutism and

closedness of beliefs, high positive dependence on authority, high social identification and conventionality and strong ethnocentricism (Harvey, 1966). Concepts are generally highly undifferentiated and the individual is most susceptible to external control. There exists a high degree of similarity between this level of functioning and the authoritarian syndrome (Bower, 1969).

The next level of functioning is termed System Two, which is one step above System One in abstractness. This produces, within the individual, a limited amount of differentiation, typified by feelings of uncertainty, distrust and rejection of socially accepted standards of behavior (Bower, 1969).

System Three levels of functioning are still more abstract than the previous level. The individual develops some autonomous personal standards and fairly positive ties to the prevailing social norms, but is, to an extent, incapable of functioning in an independent manner (Bower, 1969).

System Four functioning is regarded as the most abstract of the continuum and this type of individual tends to have a highly differentiated and integrated cognitive structure and, consequently, is more flexible, more creative and more relative in thought and action (Bower, 1969). Such individuals tend to be guided more by internal standards and are free of external criteria and conventions (Harvey, 1966; Harvey, Hunt, & Schroder, 1961). Greater awareness tends to be accompanied by lower levels of absolutism and categorical thinking. Not everyone develops to the same level of complexity. Such individuals would be the antithesis of the highly authoritarian personality. Kelly (1955) and Bieri, Atkins, Briar, Leaman, Miller and Tripodi (1966) maintain the cognitively complex person has an advantage over the cognitively simple person in processing information relating to the environment.

Harvey, Hunt and Schroder (1961) maintain that the various levels of personality functioning come about as a result of childhood rearing practices. Also

instrumental are early environmental factors and interaction with parents and society. "Schroder and Harvey measure cognitive complexity by concentrating on the intellectual features of the first and last categories, leaving alone the two intermediaries, which are based largely on social characteristics" (Gardiner, 1968, p.11). Gardiner notes that Hunt and Joyce's (1967) use of the intermediate categories has contributed little or nothing to conceptual systems theory or practice. This study adopts this viewpoint.

Cognitive Complexity and AIDS

Anderson (1968) used the concept of cognitive complexity in a novel manner to examine the psychological implications of Galbraith's work - "The New Industrial Estate". Galbraith's thesis, according to Gardiner (1968), was that individual decision abilities were deteriorating. Anderson notes that this may be a result of collaboration of the educational media and corporations, and their mutual desire that the consumer be compliant, conforming and cognitively simple. One needs only to look at the early course of the AIDS disease to discern how closely it was linked to the political and social zeitgeist in the United States. Check (1987) makes this point clear:

> Several facets of the political reporting model have been derived from reliance on appeals to authority and have led to unbalanced reporting on AIDS: single source reporting, favoring quotable sources; crediting conspiracies; lack of follow up; focussing on controversy; and emphasizing entertainment value. (p. 987)

Baker (1986) questions whether the dearth of media attention, research and political action was "tied to the stigmatized status of most of the people with AIDS" (p. 180). For a short time the disease was known as GRID or "gay related immune deficiency" (Altman, 1982). Cahill (1983) maintains that it was only when a link

was established between blood transfusions and the transmission of AIDS, and thus implicitly the possibility of a spread to the general population, that organized medicine began to mobilize and heralded a peak of political action and reaction in 1983, that gained further impetus from the discovery that heterosexual contact could spread AIDS. Schanberg (1983) noted that when AIDS was linked only to homosexuals and drug addicts attitudes tended to be less urgent.

Harvey (1966) notes that the cognitively complex individual is well equipped to cope with an environment full of uncertainty and conflict due to flexibility, creativity and independence. The advent of AIDS brings with it many parallel demands. Gardiner's (1968) statement is valid: "Clearly a society concerned with the preservation of effective democratic processes would do well to encourage the maximum amount of high conceptual level group functioning" (p.16).

Cognitive Complexity and Decision Making

With reference to decision making, Sieber and Lanzetta (1964) found that cognitively complex persons sought more information and took more time before reaching decisions than did cognitively simple individuals. Sieber (1964) found that teachers tended to exhibit similar characteristics in a similar study and then focused on developing training methods that would increase the complexity of information processing and reported some improvement when comparing the experimental group with the untrained control group.

Vannoy (1965) factor analyzed a number of tests that purported to measure cognitive complexity. A varimax rotation, on a principal axis analysis, derived eight interpretable factors that reflected three broad behavioral tendencies. These included the tendency to emphasize many, rather than few judgmental dimensions, the tendency to use many, as opposed to few positions on these judgmental factors and finally, to maintain a broad flexible perspective rather than a narrow inflexible one.

However, overall variance resolved was not high, and the results of this study must be interpreted with caution. In terms of measuring cognitive complexity, it is possible, according to Hunt (1966), to identify three different levels of methodological problems. The first refers to the issue of relating the definition to a general class of measurement operations, the second refers to the selection of specific forms of these measurement operations, and the third refers to the derivation of scores from these specific forms of measurement operations. Empirical studies of cognitive complexity have experienced problems with at least one of each of these levels. Reviews (Bieri, 1961; Scott, 1963, 1966; Jaspars, 1963) of relevant research in the 60's point out that there was a marked lack of agreement between different levels of the variable, according to Harvey (1966). This remains an issue and needs to be considered in evaluation of research involving this concept.

Schroder, Driver and Streufert (1967) focused on information processing as a means of examining conceptual systems functioning. Stewin (1969) notes that central to this position is the premise that an individual's functioning within a stimulus domain is determined directly by what Suedfield and Hagen (1966) term three primary factors that comprise information load, information diversity and rate of change of information. Secondary factors such as success and failure, set and orientation, have an indirect bearing on the manner in which information is utilized by an individual (Stewin).

Cognitive Complexity and Intolerant Attitudes

Sudanius (1984) investigated the relationship between several dimensions of sociopolitical ideology and cognitive complexity and concluded that general conservatism, racism, sexual repression and authoritarian aggression correlated to a statistically significant level with cognitive complexity. Many of these facets are pertinent to AIDS.

Rotter and O'Connell (1982) used Schroder and Streufert's (1962) measure of cognitive complexity to examine the relationship between cognitive complexity, sex-role orientation and tolerance for ambiguity. Cognitive complexity and intolerance for ambiguity were negatively correlated and cognitive complexity and androgyny were positively correlated.

Cognitive Complexity and AIDS

The implications for such thought processes are relatively clear in dealing with the topic of AIDS and the ramifications of such a disease. Concrete thinkers are more likely to be more negative in their evaluation of those who have the disease, more likely to advocate authoritarian preventive strategies and less likely to be able to evaluate and process the large amounts of information, factual and anecdotal, dealing with AIDS that the public is inundated with. Abstract thinkers, on the other hand, are more likely to deal with the information in a rational and flexible manner and less likely to be illiberal in their approach to the disease and those who may carry it. King et al. (1988) conceded that it was possible that information available to individuals "about AIDS may have been too confusing to influence their beliefs or convince them to change behaviors" (p. 135).

Integration of the Personality Correlates.

Three different personality variables have been introduced in this paper. They were erotophobia-erotophilia, authoritarianism and cognitive complexity. Common ground exists between all of them if one accepts the theoretical underpinnings of each. The manner in which the personality is shaped is through early childhood and adolescent experiences and, in particular, as a result of childrearing processes and the influence of significant others in the individual's life. This pattern emerges in the literature of each personality variable. Empirical validation of such theoretical

underpinnings is beyond the scope of this paper and, indeed, may be beyond the scope of psychology as a discipline at its present level of knowledge. The measures discussed have been adopted as operational definitions of the various traits. An inductive approach is predicated by this adoption. Provided one is cautious about generalizing findings derived from such research, this approach is tenable. Similarities do exist between these scales. Subtle differences emerge. Erotophobia-erotophilia tends to be a dimension with more specifically defined parameters, whereas the concept of authoritarianism reflects a more generalized construct.

Another facet that must be looked at is that the first two variables (erotophobia-erotophilia and authoritarianism) generally reflect belief content. Ward (1986) points out, "if all the predetermined ideological content is manifest in a subject's responses then the subject is assumed to have a particular structure" (p. 141). Such a point is very valid, but it does limit the analysis that one can perform and the conclusions that one can generate from such analysis. The most one can then do is identify "what goes with what?" (Ward, p. 141). Underlying structures can only be assumed and not demonstrated. Rokeach (1960) stipulates the following is an essential requirement for studying belief systems. "To study the organization of belief systems, we find it necessary to concern ourselves with the structure rather than the content of beliefs" (p. 6). The construct of cognitive complexity does, to a greater degree, get at underlying structure. It is with this intent in mind that cognitive complexity is included in this study and it is this that distinguishes cognitive complexity from the other two personality variables. This measure would involve what Ward terms a diachronic perspective "which places an emphasis on the quality of cognitive process" (p. 143), involving fundamentally different structures of thought. Overall, the three scales attempt to achieve a "multi-operational"

approach to measurement or research - an approach that Cook and Campbell (1979) advocate.

CHAPTER 3.

EXPERIMENTAL DESIGN

This study examined the following: the personality dimensions of erotophobia-erotophilia; authoritarianism; cognitive complexity; levels of AIDS and sex knowledge; attitudes to AIDS, and reactions to educational posters on AIDS. Respondents were sampled using an anonymous self-report inventory.

Participants

The sample consisted of 131 students in the Faculty of Education, at the University of Alberta. These students were in their third or fourth year of study and working towards completion of Education degrees and were enrolled in various seniorundergraduate courses. The sample drew from both rural and urban populations. Further demographic information was not collected in order to ensure anonymity. Questionnaires were administered to 140 students. Complete data was available for 131. There were 56 males and 75 females in the sample. Their ages ranged from 19 to 57 years.

University education students were considered an ideal group to study for the following reasons. First, they may be at greater risk of HIV infection than the general population as most are of a sexually active age, because this is historically the age group with the highest reported sexually transmitted diseases (Health and Welfare Canada, 1989a). Second, they will soon be in a position to provide influential models of behavior and to shape knowledge about, and attitudes towards AIDS. Third, they provided an accessible and amenable research group.

Measures

Participants each received a questionnaire containing the following measures: the California F Scale (Adorno, Frenkel-Brunswik, Levinson & Sanford, 1950); the Interpersonal Topical Inventory (Tuckman, 1966); the Sexual Opinion Survey (White, Fisher, Byrne & Kingma, 1977); the Miller-Fisk Sexual Knowledge Questionnaire (Gough, 1974); an AIDS Knowledge Scale; the Marlowe-Crowne Social Desirability Scale (Strahan & Gerbasi, 1974); an AIDS Attitude Scale; open ended questions and a semantic differential scale, which required them to rate their responses to educational posters on AIDS. Each instrument used, and the scoring procedures are explained in this chapter. A copy of the questionnaire can be found in Appendix A.

The California F Scale (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950)

A twenty nine item version of the original California F scale was used. This is a measure of authoritarianism. Two items were changed in order to make them more acceptable to respondents. The item which originally read "When a person has a problem or worry, it it best for him not to think about it, but to keep busy with more cheerful things" was changed to read "When a person has a problem or worry, it it best for him/her not to think about it, but to keep busy with more cheerful things" in order to to avoid offending female respondents. The item which originally read "The true American way of life is disappearing so fast that force may be necessary to preserve it" was changed to read "The true Canadian way of life is disappearing so fast that force may be necessary to preserve it" in order to make it more acceptable to the Canadian sample. A six option Likert (1967) scale was adopted in order to force a

choice from respondents. The construct validity, and other psychometric issues pertaining to this scale, have already been discussed in depth in an earlier chapter.

The Interpersonal Topical Inventory (Tuckman, 1966)

A short form of Tuckman's (1966) Interpersonal Topical Inventory (ITI) was used in this study to measure cognitive complexity. Tuckman initially developed the ITI as a research tool. Gardiner (1968) proposed a shortened form. Bower (1969) noted Gardiner (1968) included a large number of complexity measures in a factor analytic study. The shortened form included those ITI items that correlated over .20 with subjects factor scores for the complexity factor. Bower (1968) notes that the mean correlations of the thirteen items ranged from .20 to .31. All were significantly different from zero (n = 109). Bower (1968) found that the scores on the short form of the ITI correlated .54 with scores on Tuckman's 36-item ITI. Tuckman (1966) notes that the original ITI is related to the Paragraph Completion Test (Contingency Coefficient = .54), which is also considered to be a valid measure of complexity. Suedfield, Tomkins and Tucker (1969) report a significant correlation of .19 between the Sentence Completion Test and the original ITI. Jacobson (1973) reports similar findings.

The Sexual Opinion Survey (White, Fisher, Byrne & Kingma, 1977)

Scores on this twenty-one item measure of erotophobia-erotophilia can range from zero (most erotophobic) to 126 (most erotophilic). Each item is scored on a seven point response scale (Likert, 1967). Originally scores on the eleven negatively worded items were subtracted from scores on the 10 positively worded items and 67 added to the result. A different scoring procedure was used in computer scoring the scale for this study, but the scores obtained were a linear transformation

of the method favored by White et al., and yield identical results to those obtained if their procedure had been followed. The test constructors report internal consistency reliability coefficient of .84 or above (Fisher et al.,1979; White et al., 1977).

Several forms of evidence attest to the construct validity of the scale. For example Sexual Opinion Survey scores had Pearson Product Moment correlations of r = .60 with scores on the Sex Guilt Scale (Mosher, 1966, 1968). This is itself a reliable and valid instrument, which is reported to measure a construct closely akin to erotophobia (Gerrard & Reis, 1989). Additionally White et al. (1977) administered the Sexual Opinion Survey to 195 introductory psychology students (105 male, 90 female) and found that in both sexes all 21 items were significantly related to responses to studies depicting heterosexual, homosexual and autosexual acts. Several predictions derived from the construct of erotophobia were evaluated by Fisher et al. (1979) and also provide evidence for construct validity. Two hundred and sixty-nine introductory psychology students (149 male, 118 female) answered the Sexual Opinion Survey and several other self-reports and recorded their responses to a number of erotic slides. Moreover, in comparison with erotophiles, erotophobes reported fewer premarital sexual partners, fewer sexual dreams, less masturbation, less experience of erotica, less liberal sexual attitudes and greater religiosity. Erotophobes reported more "shock", "nausea", "disgust", "anger", and "curiosity", in response to the erotic slides. Erotophobes were also more likely to advocate the censorship of books or films depicting scenes similar to those shown in the slides. Fisher (1986), also noted that cross-validation revealed all items of the Sexual Opinion Survey were stable predictors of erotica across different groups of respondents. All of these items were also unrelated to Crowne and Marlowe's (1964) measure of the social desirability response set (Fisher, 1986). Further evidencing the validity for this scale, Gilbert and Gamache (1984) identified

three interpretable clusters of items within the scale . They labelled the first factor "open sexual display", the second factor "sexual variety" and the third factor "homoeroticism". The factor method used involved principal components analysis with varimax rotations.

Miller-Fisk Sexual Knowledge Questionnaire (Gough, 1974)

Miller and Fisk (1969) developed a 49-item sexual knowledge questionnaire for use with lay subjects as a useful adjunct to studies in family planning, population, and related issues. This instrument includes questions on reproductive physiology, effectiveness of different measures of contraception, menstrual functioning and factors including sex drive and fertility. Gough (1974) developed a shortened version of the original scale that was intended to retain the range of content and statistical reliability of the original. Item analyses were conducted on questionnaires completed by 104 subjects. Point-biserial correlations were computed between a correct answer and total scores. Items were deleted for the following reasons: too low a correlation between an item and total score; too great a sex difference in either percentage correct or item vs. total score validity and, thirdly, on the basis of level of difficulty - those items which were either too hard or too easy were dropped. The scale was thus reduced to 24 items. The revised scale was found to correlate .94 (males, n = 29) and .92 (females, n = 75) with the original. The revised scale was readministered to several new samples and all 24 of the point-biserial coefficients were statistically significant, beyond the .01 level of probability, suggesting that an acceptable degree of internal consistency was achieved in the revised questionnaire. Odd-even reliability coefficients for males, females and the total sample were .70, .62 and .67 respectively.

AIDS Knowledge Scale

This measure is comprised of three general scales or areas; a 26 item true-false AIDS Knowledge Scale, and two open ended scales. The first of the two open ended scales asked respondents to list four precautions that could be taken against the transmission of AIDS. The second open ended scale examined whether respondents were offended by any question, whether respondents experienced any difficulty with any question and, if so, by what question. Participant comments, criticisms, and suggestions were also examined in this part of the scale. Self-reported changes in behavior, or levels of awareness as a result of AIDS and AIDS education strategies, were also investigated.

The AIDS Knowledge Scale was constructed as follows. A pool of 30 true-false items were generated. Overlapping or peripherally relevant items were eliminated. The scale was given to 40 students (26 female, 14 male) in an Educational Psychology class at the University of Alberta (prior to use in the study). In addition to responding to each item, students were asked to indicate any difficulties that they might have had in completing the scale. On the basis of the feedback provided and the difficulties reported, the scale was rewritten. Answers to all questions were confirmed with available medical information.

Marlowe-Crowne Social Desirability Scale (Strahan & Gerbasi, 1974)

A homogenous eight item short form of the Marlowe-Crowne 20 item scale developed by Strahan and Gerbasi (1974) was used to examine whether participants' answers seemed influenced by the social desirability response set. Scores on this partly negatively keyed true-false inventory can range from zero (least socially desirable response) to eight (most socially desirable response). Strahan and Gerbasi discuss the psychometric properties of the shortened version of the scale. They

report overall satisfactory reliability coefficients of between .59 and .70 obtained from study conducted with a sample of over two hundred students. Principal components analysis was performed to provide evidence of the scale's construct validity.

AIDS Attitude Scale

Forty-two statements, with an even numbered Likert response scale, were included. The questions covered a number of different facets of attitudes towards and understanding of AIDS. This scale includes items examining the seriousness of the disease, the perceived likelihood that it may soon be curable, the importance and effectiveness of public education in counteracting AIDS, the need to devote resources to research on AIDS and to treat AIDS victims, and the extent to which individuals view AIDS victims and high risk groups as culpable and countenance illiberal strategies to counteract AIDS. Also included were a few items too inchoate to categorize, including issues related to alcohol use and attitudes towards condoms. The scale was developed in the same manner and on the same sample as the AIDS Knowledge Scale.

Posters on AIDS

A sample of contrasting informational and educational posters on AIDS, produced in a variety of countries were surveyed and then separated into groups of posters that relied on different themes to convey information. These themes included explicitly homosexual messages, explicitly heterosexual messages, informative strategies and so on. A brief description of each poster is included below. Slides of the original posters are available from the author.

The first poster shows a picture of a young male wearing denim jeans, viewed from the back. There is a condom in his pocket. The poster bears the inscription "A rubber is a friend in your pocket". The second poster shows two muscular male chests touching each other, with the statement "Condoms - Use Them". The third poster is captioned "Which of these will give you AIDS?" Below that a number misconceptions concerning possible means of transmission were shown, i.e., through using cutlery, toilets, drinking glasses, telephones. The fourth poster showed a male reclining provocatively in a state of undress in bed and it is captioned "You'll never forget the feeling of safe sex". Below that inset into a little box is the statement "Hot Nights Safe Sex" and warning individuals to use condoms. The fifth poster shows a picture of Michaelangelo's statue "David" and has the caption "Get It Under Cover". Inset into a box below is the warning to "Play it safe" and advocating use of a condom. The sixth poster shows a very well proportioned muscular upper body of a male and has the caption suggesting that it is masculine or manly to use a condom to prevent transmission of diseases. The seventh poster shows a group of males with their arms around each other at the beach wearing brief swimsuits. The caption read "Have a safe sex summer". The final poster shows a picture of a pensive adolescent male staring at the viewer. The caption reads "Stopping AIDS is up to you".

Respondents were asked to rate their responses to these eight posters according to a semantic differential scale. The semantic differential scale was developed by Osgood as a method of studying attitudes by focusing on the meaning that people give to a word concept or symbol (Maguire, 1973). The underlying rationale behind this approach is the assumption that, within the the hypothetical semantic space of an unknown number of dimensions, the meaning of a word, concept or symbol can be represented as a particular point. Osgood's procedure was to have people judge a particular concept on a set of semantic scales defined by verbal opposites. Ratings

collected by this method were intended to reveal particular dimensions that people use to qualify their experience and may reflect intensity of feeling for an attitude object (Zimbardo & Ebbeson, 1969).

Procedure

Approval to conduct the study was obtained from the Department of Educational Psychology Research and Ethics Committee. Permission was then obtained from university instructors to use designated classroom time to conduct the study. Students were asked to complete an anonymous questionnaire on a number of issues related to AIDS, sexual knowledge, and attitudes as well as to evaluate certain educational posters on AIDS. Those who volunteered were warned that some questions were of an extremely personal nature. It was stressed that participation was entirely voluntary, and that subjects could withdraw at any stage, should they so desire. Complete anonymity was assured. Participants were also asked to indicate if they found any part of the questionnaire offensive and to specify the questions they found offensive so that future research might benefit. They were also asked to record, in an appropriate section, any areas of the questionnaire that caused them difficulty. The survey took about an hour to complete. Once the exercise was completed all participants were thanked and the overall nature and purpose of the study explained. Any questions respondents had were answered.

Purposes of this Study.

The purposes of this study were threefold. First, the construct validity of the various measures was examined through factor analysis. Second, the relationships between attitudes related to AIDS, information levels about AIDS, subjects reactions to posters about AIDS education, and a number of personality variables were

examined. Finally, differences between genders, on various measures, were examined.

Hypotheses

In each hypothesis, levels of erotophobia-erotophilia are operationally defined by the Sexual Opinion Survey scores. Levels of authoritarianism are operationally defined by scores on the F Scale. Cognitive Complexity levels are operationally defined by scores on the ITI. The attitudes to AIDS scores are defined primarily by AIDS Attitude Scale score, although factor scores derived from factor analysis were also considered. AIDS Knowledge and Sex Knowledge scores are derived from sum scores of correct responses to each of these scales.

Hypothesis 1:

It is hypothesized that a number of significant relationships exist between erotophilia and sex knowledge, AIDS knowledge, attitudes towards AIDS, cognitive complexity and authoritarianism.

Hypothesis 1:1. Erotophilia would be significantly positively correlated with scores on the Sex Knowledge Questionnaire.

Hypothesis 1:2. Erotophilia would be significantly positively correlated with scores on the AIDS Knowledge Scale.

Hypothesis 1:3. Erotophilia would be significantly positively correlated with a number of liberal attitudes towards AIDS

Hypothesis 1:4. Erotophilia would be significantly positively correlated with cognitive complexity.

Hypothesis 1:5. Erotophilia would be significantly negatively correlated with authoritarianism.

Hypothesis 2:

It is hypothesized that a number of significant relationships exist between authoritarianism and cognitive complexity, sex knowledge, AIDS knowledge and attitudes towards AIDS.

Hypothesis 2:1. Authoritarianism would be significantly negatively correlated with levels of cognitive complexity

Hypothesis 2:2. Authoritarianism would be significantly negatively correlated with scores on the Sex Knowledge Questionnaire.

Hypothesis 2:3. Authoritarianism would be significantly negatively correlated with scores on the AIDS Knowledge Scale.

Hypothesis 2:4. Authoritarianism would be significantly negatively correlated with a number of liberal attitudes related to AIDS.

Hypothesis 3:

It is hypothesized that a number of significant relationships exist between cognitive complexity and sex knowledge, AIDS knowledge and attitudes towards AIDS.

Hypothesis 3:1. Cognitive complexity would be significantly positively correlated with scores on the Sex Knowledge Questionnaire.

Hypothesis 3:2. Cognitive complexity would be significantly positively correlated with scores on the AIDS Knowledge Scale.

Hypothesis 3:3. Cognitive complexity would be significantly positively correlated with a number of liberal attitudes related to AIDS.

Hypothesis 4:

It is hypothesized that levels of knowledge about AIDS would be significantly negatively correlated with of liberal attitudes related to AIDS.

Hypothesis 5:

It is hypothesized that significant differences in levels of erotophilia, authoritarianism and attitudes towards AIDS would exist between males and females.

Hypothesis 5:1. Significant differences would be found between males and females in levels of erotophilia.

Hypothesis 5:2. Significant differences would be found between males and females in attitudes towards AIDS.

Hypothesis 6 :

It is hypothesized that a number of significant differences exist in reaction to AIDS education posters between high and low scorers on erotophobia-erotophilia, authoritarianism, cognitive complexity and between males and females.

Hypothesis 6:1. Significant differences would be found between erotophobes and erotophiles in reactions to AIDS education posters on all semantic differential descriptors.

Hypothesis 6:2. Significant differences would be found between authoritarians and non-authoritarians in reactions to AIDS education posters on all semantic differential descriptors.

Hypothesis 6:3. Significant differences would be found between concrete thinkers (low ITI scorers) and abstract thinkers (high ITI scorers) in reactions to AIDS education posters on all semantic differential descriptors.

Hypothesis 6:4. Significant differences will be found between males and females in reactions to AIDS education posters on all semantic differential descriptors.

Limitations of this Study

This study does not attempt a causal analysis and relies heavily on correlational techniques. However, if certain predictive relationships can be discovered between a number of variables then it is reasonable to use this as a starting point for future research under more controlled conditions to address the issue of causality.

The overall reliabilities and validities of the scales place upper limits on the significance of results that one would obtain. As a partial check a combination of newly constructed and commonly used instruments have been used and, wherever possible, the scores have been compared to findings of previous studies.

The generalizability of these results across different samples and time periods is uncertain and limited by the use of a non-random sample. Answers by different samples or a similar sample after exposure to education campaigns and experiences might differ from those presented here. Exposure to, or personal contact with, AIDS cases or victims may also confound results to an extent, but this particular aspect may be ameliorated by the relatively large sample utilized.

The absence of behavioral assessment also creates a problem. Studies which incorporate the use of behavioral assessment measures suggest that there are discrepancies between reported change and actual change in sexual behaviors and, moreover, that such findings are not consistent and generalizable across either gender, age, or sexual preference (Baldwin, Whiteley & Baldwin, 1989). Given the nature of the study and the topic, it is the position of the author that it would have been irresponsible and unethical to include requests for such personal information without satisfactorily establishing grounds for doing so. Part of the purpose of the study was to examine the acceptability of sex research to Canadian University students and, thus, establish grounds for incorporating a behavioral component into AIDS research.

These factors do not invalidate the study. They do, however, militate strongly for responsibility and caution in generating conclusions and evaluating the implications that arise from this work.

CHAPTER 4.

STATISTICAL DESIGN AND RESULTS

Data Analysis and Statistical Overview

Questionnaires were scored and computed primarily using the Statistical Package for the Social Sciences - Revised (SPSSx). Data was analyzed in a number of stages. Descriptive data were calculated for all subtests. Principal components analyses were carried out on a number of the instruments used, followed by varimax, equamax, quartimax and oblique oblimin rotations for between three and eleven factors, depending on the scale. Additional principal axes factor analyses were performed with the Fact 20 program. Pearson Product Moment Correlations were calculated and scatterplots analyzed. T tests and Multiple Analysis of Variance (MANOVA) were used to test a number of the hypotheses. Multiple regression was used to find the best predictors of certain scales.

Missing data was handled in the following manner. With tests of achievement, such as the AIDS Knowledge Scale, the SPSSx program scores missing items as incorrect, whilst with tests of affect, such as the AIDS Attitude Scale, subjects with missing data were excluded. This has resulted in slight differences in sample sizes cited in this study, depending upon the measure and statistical technique reported. However, it was assumed that this method was the most desirable in that it enabled more complete data sets to be available for analysis than if the subject's with missing data were excluded from the analysis altogether.

Factor Analysis

One of the primary multivariate techniques used mainly to investigate construct validity of a number of the measures in this study was factor analysis. Kerlinger (1979) defines factor analysis as:

> an analytic method for determining the number and nature of the variables that underlie larger numbers of variables or measures. It tells the researcher, in effect, what tests or measures belong together - which ones virtually measure the same thing, in other words, and how much they do so. The underlying variables in this definition are called 'factors'. (p. 180)

The overall objective behind factor analysis is to reduce or simplify data to a smaller number of variables that can explain the common variance of subtests or items. It must be noted that a "factor" is not a real entity, but rather, is a hypothetical construct or latent variable that is inferred from relationships between other measures (Kerlinger,1979). Keith (1987) emphasizes that factor analysis provides a useful method of determining discriminant and convergent validity.

Kim and Mueller (1978) identify two main uses of factor analysis. The first is referred to as exploratory. It involves use of factor analysis as a way of ascertaining the minimum number of hypothetical factors that can account for observed covariation, as well as a means of exploring the data for possible data reduction. The second use of factor analysis is referred to as confirmatory. In this case, factor analysis is used as a means of testing specific hypotheses. This study utilizes the former approach.

Factor analysis generally involves three steps: preparing a relevant covariance matrix; extracting initial factors; and rotating to a terminal solution (Kim & Mueller, 1978). One of two main models of factoring are commonly chosen - either principal components analysis or principal factoring. According to Mulaik (1972),

the former is not truly factor analysis, although it falls in the general rubric of factor analysis. Results obtained with this method do not differ greatly from those one would achieve from common factor models. Velicer, Peacock, and Jackson (1982) suggested that results of various factor procedures generally are indistinguishable, provided the correct number of factors are extracted. Factor analysis attempts to establish what test items have in common with each other. The principal components technique attempts to explain all the variance on a test, including error variance. Principal factor analysis places estimates of the items communalities in the diagonal of the correlation matrix, whilst principal component analysis inserts 1.0's into the diagonals (Altemeyer, 1981). Common factor models may have any number of mathematical solutions for a given set of data and therefore involve a number of arbitrary decisions, which is a limiting factor (Schoneman & Steiger, 1976). Principal components techniques avoid this pitfall and may thus be more defensible.

The rotation step involves two options, the orthogonal rotation and the oblique rotation, but within these parameters there are a number of possible variants. The orthogonal rotation results in factors that are not correlated or are independent of each other. When plotted on a Cartesian coordinate, the angle between two factors is 90 degrees. In contrast, oblique rotations are correlated. Thus, when plotted on a Cartesian coordinate, the angle between factors is less than 90 degrees. The placement of one factor axes in an oblique rotation does not place limitations on the second factor axes (Gorsuch, 1983), with this technique. Das, Kirby, and Jarmen (1979) note that the desirable objective in factor analysis is to pursue what Thurstone identified as simple structure, i.e., the simplest matrix which reproduces the variables most faithfully. Ideally, each variable should have only one salient loading and a maximum number of zero, or nonsignificant, loadings. This is not

always attainable (Comrey, 1978), but when it is, greater ease of interpretation is achieved. Oblique rotations generally come closer to simple structure in comparison to orthogonal rotations, but the varimax criteria, which is an orthogonal solution, does approximate simple structure (Kaiser, 1958). Orthogonal rotations tend to be more common in the literature (Altemeyer, 1981) due to their simplicity relative to oblique methods (Nunnally, 1967). The most common factor rotation is the varimax method according to Altemeyer (1981), and Gorsuch (1983) notes that it is probably the best of the available orthogonal rotations. This method tends to minimize the complexity of the variables and maximize factor loadings across columns (Kaiser, 1958). The varimax solution does not yield one general factor and is inappropriate if one expects a general factor to emerge (Gorsuch), because variance disperses onto common factors. The quartimax solution, on the other hand, tends to create a larger general factor. The equamax solution attempts to provide a compromise between these two solutions. Oblique rotations are more difficult to work with since two types of matrices, pattern and structure, must be examined in order to interpret data. With orthogonal rotations, pattern and structure matrices are identical and this problem does not exist. Communality estimates are also more difficult to calculate in oblique solutions (Nunnally, 1967).

With a sample size of this nature it is acceptable, when interpreting factors to use variable loadings equal to or greater than .30 (Gorsuch, 1983). Loadings lower than this were, thus, not considered significant. According to Gorsuch it is desirable to have a minimum of 100 subjects. It is also generally considered desirable to have approximately 3 times the number of subjects than variables, depending whether the number of variables is large; more than twenty or small; less than ten (Baggaley, 1982). The largest scale on this survey comprised 42 items. Thus, use of factor analysis is acceptable in terms of the sample size, even with this scale. Given the

exploratory nature of this study, the sample size used is clearly acceptable, yet generally, results require further validation from factoring of larger samples.

The "number of factors" problem was addressed through combined usage of the eigenvalue-one and scree test criteria (Cattell, 1966). However, various solutions around those suggested by the eigenvalue and scree test criteria were also considered. Carroll (1985), Comrey, (1978), and Gorsuch, (1983) advocate such an approach. In adopting this approach, only factors with at least two salient loadings should be considered because lower loadings are generally trivial or insufficiently defined. Therefore, a solution with one less factor would be indicated. The ultimate criteria for deciding the most "ideal" solution in this study was psychological meaningfulness and interpretability.

T tests

The t test is one method of testing the significance of the difference in two means. Analysis of variance is analogous to the t test, but is used to compare the means of more than two groups (Smith & Glass, 1987). The t test analysis used in this study yield identical solutions to oneway analysis of variance techniques and was used to compare mean gender scores. Therefore, this approach was considered justified. In addition, the SPSSx program provides two independent estimates of the population variances of the measurements in the groups and also tests for homogeneity of variance. This is useful when comparing independent groups of unequal sizes.

An associated problem in using the t test is that the possibility of making a Type 1 error escalates exponentially, depending on the significance, or alpha level chosen, and on the number of t tests used (Glass & Hopkins, 1984). Within the context of this study, generally alpha levels of .01 have been chosen, which, to an extent, ameliorates the problem. In addition, consideration of the magnitude of the difference

between observed t values and critical values can provide further information. The t test is also robust with respect to failure to meet normality assumptions (Glass & Hopkins, 1984).

Multiple Analysis of Variance (MANOVA)

This is equivalent to analysis of variance, except that it is used in instances where more than one dependent variable is employed. Where there where more than two comparisons being made across groups, post hoc analyses using the Scheffe test were used to resolve ambiguity.

The Normal Distribution

Normal distribution probabilities are one of the most important in statistics because they serves as useful approximations for the distribution of many variables in statistical analysis in the social sciences (Agresti & Finlay, 1986). Several univariate, and almost all multivariate statistics are based on the univariate and multivariate normal distributions respectively. The univariate normal distribution, which is defined by its density function (Bock, 1975; Van de Geer, 1971), is "a bell shaped frequency distribution curve, which is often obtained when human characteristics are plotted and measured" (Burns & Dobson, 1981, p. 424). The multivariate distribution may be defined as a "p dimensional random variable X which is said to have a multivariate distribution, if and only if, every linear compound of X has univariate normal distribution" (Chatfield & Collins, 1980). Inspection of the scattergram of X (any variable) versus Xn (normalized X) provides a convenient test of univariate normality that can be employed in biometric research. Departure from rigid linearity is indicative of a departure from normality. Multivariate normality may be assessed by univariate techniques that test margin normality (Chatfield & Collins). Although marginal normality does not reflect joint normality, non-normality is often reflected in marginal distributions

(Ghanadesikan, 1977). Thus, the univariate tests of normality reported above, which support the marginal normality of the multivariate distribution, fail to cast doubt on the joint normality of the multivariate distribution.

A number of hypotheses were tested using Pearson r correlations. Inspection of the scatterplots generally failed to cast doubt on the assumptions of linearity or homoscedasicity (equal variances in x and y arrays). The use of the Pearson r correlation is thus justified.

Internal Consistency

Several methods can be used to estimate the internal consistency of a test. The most common being split-half or subdivided tests, and coefficient alpha procedures. The three most widely used coefficient alpha methods are Kuder-Richardson 20, Cronbach's alpha and Hoyt's analysis of variance (Crocker & Algina, 1986). All three generally yield similar results. Internal consistency information for all the scales were obtained using SPSSx program which generated Cronbach's alpha and Spearman-Brown split-half coefficients. The latter were used specifically in instances where internal consistencies or alpha coefficients were very low.

Characteristics of the Sample

Certain demographic characteristics of the sample are shown in Table 1 and 2. Educational differences were not considered a moderating variable.

Table 1

Characteristic of the Sample by Sex and Marital Status

Gender	Married		Single		Total Sample	
	N	(%)	N	(%)	N	(%)
Male	8	(14.3)	48	(85.7)	56	(100)
Female	18	(24.0)	57	(76)	75	(100)
Total	26	(19.8)	105	(80.2)	131	(100)

Table 2

Characteristic of the Sample by Age

Age	Male		Female		Total		Total % In Each
	N	(%)	N	(%)	N	(%)	Age Group
Under 20	0	(0)	1	(.8)	1	(100)	.8
20 to 24	44	(44.4)	55	(55.6)	99	(100)	75.6
25 to 29	4	(26.7)	11	(73.3)	15	(100)	11.5
30 to 34	5	(62.5)	3	(37.5)	8	(100)	6.1
35 to 44	1	(16.6)	5	(83.4)	6	(100)	4.6
45 and up	2	(100)	0	(0)	2	(100)	1.5
Total	56	(42.7)	75	(57.3)	131	(100)	100

The majority of the sample falls between the age of 20 to 24 (see Table 3). This is a useful group to analyze because it can be reasonably assumed that a number of the sample are sexually active (Health and Welfare Canada, 1989a).

Table 3

Sample Means and Standard Deviations by Age

	N	Mean	S.D.
Male	56	24.00	6.27
Female	75	23.50	5.09
Total	131	23.71	5.61

Results

The means and standard deviations for each scale used in this study are presented in Table 4.

Table 4

Means and Standard Deviations of Measures Used in the Survey

Scale	N	Mean	S.D.
Social Desirability Scale	131	3.21	1.67
F Scale	131	117.50	17.77
Sexual Opinion Survey (SOS)	128	62.48	18.30
AIDS Knowledge Scale	131	21.25	2.00
Sex Knowledge Questionnaire	131	16.70	2.54
Cognitive Complexity (ITI)	131	8.12	1.89
AIDS Attitude Scale	128	190.20	25.29

Table 5

Summary of Cronbach's Alpha Internal Consistency Reliabilities

Scale	N	r
Social Desirability Scale	131	.50
F Scale	131	.86
Sexual Opinion Survey (SOS)	128	.84
AIDS Knowledge Scale	131	.19
Sex Knowledge Questionnaire	131	.35
Cognitive Complexity (ITI)	131	.27
AIDS Attitude Scale	128	.89

Table 6

Summary of Spearman-Brown Split-half Reliabilities

Scale	N	r
Social Desirability Scale	131	.55
F Scale	131	.85
Sexual Opinion Survey (SOS)	128	.81
AIDS Knowledge Scale	131	.23
Sex Knowledge Questionnaire	131	.22
Cognitive Complexity (ITI)	131	.28
AIDS Attitude Scale	128	.85

Marlowe Crowne Social Desirability Scale

Means and standard deviation for this scale appear in Table 4. High scores are considered to reflect a desire to appear socially acceptable. The internal consistency (coefficient alpha) for this scale was .50. Item-total correlations ranged from .14 to

.31. Spearman-Brown split-half reliability rose marginally to .55. The reliability coefficients are displayed in Table 5 and 6 respectively.

The relationship between social desirability and the remaining scales used in this study was investigated through Pearson correlations. Where correlations are significant, it may suggest that the individual's responses reflect a desire to appear socially acceptable and may, thus, not be a valid reflection of the persons true attitudes and feelings. The Pearson correlation coefficient calculated between social desirability and the F Scale was .00 ($n = 131$, $p = .487$, one-tailed). The intrusion of social desirability response on F Scale scores was rejected at the $p < .05$ level. The Pearson correlation calculated between the Social Desirability Scale and the Cognitive Complexity Scale (ITI) was .18 ($n = 131$, $p = .017$, one-tailed). Possibile of intrusion of social desirability response set on the Cognitive Complexity Scale (ITI) was rejected at the $p < .01$ level, but not at the $p < .05$ level. The Social Desirability Scale and the Sexual Opinion Survey correlated -.06 ($n = 128$, $p = .247$, one-tailed). The possibility of intrusion of social desirability response set on the Sexual Opinion Survey was rejected at the $p < .05$ level. The Pearson correlation calculated between the Social Desirability Scale and the AIDS Attitude Scale was .18 ($n = 128$, $p = .021$, one-tailed). Again, the possibility of intrusion of social desirability response set on this scale was rejected at the $p < .01$ level, but must be considered a possibility at the $p < .05$ level. The Pearson correlation calculated between the Social Desirability Scale and the Sexual Knowledge Questionnaire was .03 ($n = 131$, $p = .367$, one-tailed), enabling the possibility of intrusion of social desirability response set on the Sexual Knowledge Questionnaire scores to be rejected at the $p < .05$ level. The possibility of intrusion of social desirability response set on the AIDS Knowledge Scale was rejected at the $p < .05$ level ($r = -.03$, $n = 131$, $p = .386$, one-tailed).

The California F Scale

The internal consistency (alpha coefficient) for this scale was .86. This appears in Table 5. Item-total correlations ranged from .09 to .58. Spearman-Brown split-half reliabilities fell within a similar range as the alpha coefficient. This result appears in Table 6. Means and standard deviations are displayed in Table 4. The scale is scored in such a way that high scores reflect more liberal or less authoritarian attitudes.

The factorial structure of the California F Scale was investigated. Principal component solutions followed by orthogonal varimax, equamax, quartimax rotations and oblique oblimin rotations for three to eleven factors were examined. Copies of the factor matrices are available from the author. The data tend, however, to suggest the F Scale is a multidimensional instrument, even if these dimensions defy interpretation. As past studies have found, these factors tended to be inchoate and difficult to interpret, despite examination of many factorial solutions and rotations. Application of the original nine constructs to interpretation of the F Scale results in even more obfiscation. No interpretable factors are generated by these criteria, suggesting the original hypotheses are not borne out by this analysis. Altemeyer (1981) notes the first seven items of this scale generally have been noted to cluster together on the first factor of a number of solutions in the literature. This may reflect some form of authoritarian aggression, authoritarian submission and conventionalism. In this study, up to six of these items loaded on a first general factor with a number of other items, but this did not cast any light on interpretation, or provide meaning to the factorial solution.

Sexual Opinion Survey (SOS)

The internal consistency coefficient (alpha coefficient) for this scale was .84. Item total correlations ranged from .09 to .63. Spearman-Brown split-half reliability fell marginally to .81. The reliability coefficients appear in Tables 5 and 6 respectively. The results suggest that the Sexual Opinion Survey possesses a high internal consistency - a useful psychometric property. Mean scores and standard deviations for the Sexual Opinion Survey for the sample are shown in Table 4 . Male and female scores are presented in Table 7, along with comparisons of male and female scores obtained from previous studies. It should be noted that the lower the score the more erotophobic or prone towards guilt and negative emotions in sexual matters an individual is considered to be.

Table 7

Erotophobia Levels in Several Different Samples

Sample	Country	Reported By	N	Mean	SD
Male University Students	Canada	Present Study (Wilson, 1990)	56	69.39	16.05
Female University Students			72	57.10	18.23
Male University Students	Canada	Gilbert & Gamache (1982)	124	79.66	15.49
Female University Students			143	62.80	17.80
Male University Students	USA	Gilbert & Gamache (1982)	78	75.46	15.55
Female University Students			86	52.66	21.61

The factorial structure of the Sexual Opinion Survey was also investigated. Principal component solutions followed by orthogonal varimax, equamax, quartimax

rotations and oblique oblimin rotations for two to seven factors were examined. The first three factors on the unrotated matrix had eigenvalues of 5.5, 2.4 and 1.6 respectively. In total, these factors explained 45% of the total variance in Sexual Opinion Survey scores. The unrotated principal components factor matrix is reported in Table 8, and the varimax rotated solution appears in Table 9. Overall, the three factor solutions yielded the most psychologically meaningful results. Varimax, quartimax and equamax solutions were substantially identical in terms of factor content, however, the magnitude of the loadings and order of each item within the factors differed slightly. The varimax solution, however, was chosen because it enabled comparison and validation with previous research.

Table 8

Sexual Opinion Survey Unrotated Principal Components Factor Matrix

Variable	Factor Loading			
	1	2	3	Communality
9	.78	.25	-.04	.67
15	-.71	-.33	.21	.66
1	.68	.32	-.24	.62
4	.66	-.39	.14	.61
12	-.64	-.06	.36	.54
18	.61	-.28	.09	.47
20	-.57	-.25	.20	.43
17	.58	.12	.10	.36
16	-.54	.10	.16	.33
7	.55	.25	-.16	.39
21	.46	.01	.06	.22
19	-.42	.23	-.43	.42
14	-.39	-.25	-.16	.24
6	-.40	.21	-.34	.31
13	-.34	.13	.22	.18
2	-.17	-.16	.06	.06
11	.23	-.75	-.15	.64
5	-.03	.75	.20	.61
10	.39	-.61	.31	.62
8	.38	.03	.68	.61
3	.47	-.08	.51	.48
% Common Variance	57.85	25.09	17.06	100.00
% Total Variance	26.03	11.29	7.68	45.00

Table 9

Sexual Opinion Survey Three Factor Varimax Rotated Factor Loadings

Variable	Factor Loading			Communality
	1	2	3	
15	-.80	-.13	-.01	.66
1	.78	.10	.01	.62
9	.75	.32	.03	.67
12	-.68	-.02	-.27	.54
20	-.65	-.10	-.02	.43
7	.62	.10	.00	.39
17	.48	.36	.03	.36
16	-.46	-.17	-.31	.33
14	-.36	-.29	.17	.24
21	.35	.28	.11	.22
13	-.31	-.01	-.30	.18
2	-.23	-.01	.07	.06
8	.04	.76	-.17	.61
3	.14	.68	.01	.48
19	-.07	-.62	-.17	.42
4	.30	.53	.49	.61
6	-.09	-.53	-.17	.31
18	.33	.44	.40	.47
11	-.09	.14	.78	.64
10	.16	.06	.77	.62
5	.23	.01	-.74	.61
% Common Variance	44.93	28.23	26.84	100.00
% Total Variance	20.21	12.70	12.08	45.00

Factor One

This factor reflects a concern with pornography, promiscuity and open sexual display and resolves 20.2% of the total variance. Items loading on this factor are shown below.

Item	Factor Loading
15) I would not enjoy watching a pornographic movie	-.80
1) I think it would be entertaining to look at hard-core pornography	.78
9) Seeing a pornographic movie would be sexually arousing to me	.75
12) Almost all pornographic material is nauseating	-.68
20) I am not curious about explicit pornography	-.65
7) Engaging in group sex is an entertaining idea	.62
17) The thought of engaging in unusual sex practices is highly arousing	.48
16) When I think about seeing pictures showing someone of the same sex as myself masturbating it nauseates me	-.46
14) Watching a go-go dancer of the opposite sex would not be very exciting	-.36
21) The thought of having long term relations with more than one sex partner is not disgusting to me	.35
13) It would be emotionally upsetting to me to see someone expose themselves publicly	-.31
2) Pornography is obviously filthy and people should not try to describe it as anything else	-.23

Factor Two

This factor reflects sexual fantasy and ease with a number of sexual practices, and resolves 12.7% of the total variance. These items are displayed below with factor loadings.

Item	Factor Loading
8) I personally find that thinking about engaging in sexual intercourse is arousing	.76
3) Swimming in the nude with a member of the opposite sex would be an exciting experience	.68
19) I do not enjoy daydreaming about sexual matters	-.62
4) Masturbation can be an exciting experience	.53
6) If people thought I was interested in oral sex I would be embarrassed	-.53
18) Manipulating my genitals would probably be an arousing experience	.44

Factor Three

This factor, which is displayed below, reflects comfort with homosexuality either in others or intra-individually, and resolves a further 12.1% of the total variance.

Item	Factor Loading
11) The idea of my being physically attractive to members of the same sex is not depressing	.78
10) Thoughts that I may have homosexual tendencies would not worry me	.77
5) If I found out that a close friend of mine was a homosexual it would annoy me	-.74

Given the nature of the AIDS disease and the importance that is placed on reduction of the sexual partners people should have, and the encouragement of safe sex practices, a further rationally derived subscale was constructed from items of the

Sexual Opinion Survey and used in interpretations for the purpose of this study. This scale consisted of three items relating to group sex, multiple sexual partners and unusual sex practices (items 7, 21 and 17 respectively). Indulging in these "high risk" behaviors would be contrary to many of the safe sex guidelines propounded by health authorites.

It is possible that use of subscale or factor scores will yield more precise relationships that may be useful in targeting behavioral change strategies. They thus warrant attention.

These data tend to support the multidimensionality of the Sexual Opinion Survey. As past studies have found, these factors yielded interpretable factors, suggesting that this is a robust scale. Gilbert and Gamache (1984) identified three interpretable clusters using a three factor varimax solution. The first factor, termed 'open sexual display', accounted for 34% of the variance and consisted of items 1, 2, 3, 7, 9, 12, 13, 15, 20, and 21. The second factor, termed 'sexual variety' consisted of items 4, 6, 8, 9, 17,18, and 19 accounted for 11% of the variance. The third factor termed 'homoeroticism' consisted of items 5, 10, 11, and 16 and resolved 7% of the variance. The similarities between the two solutions are relatively clear and a number of the items share common factor loadings.

AIDS Knowledge Scale

The means and standard deviations for the total sample appear in Table 4. The internal consistency coefficient (alpha coefficient) for this 26 item scale was .19. Item-total correlations ranged from -.14 to .25 and appear in Table 10. Spearman-Brown split-half reliabilities rose negligibly to .23. The reliability coefficients are shown in Tables 5 and 6 respectively. Generally, the internal consistency figures proved to be disappointing, particularly in light of the relative length of the scale.

However, the low coefficients achieved are, in all likelihood, an artifact of the relative simplicity of the test and thus small variance in test scores. This can be confirmed through scrutiny of the frequency distribution of the scale. Analysis of responses of individual items, however, provide some useful and interesting descriptive data.

Table 10

Psychometric Properties of the AIDS Knowledge Scale

Item No	Item Total r	Mean	Item Variance
1	.07	1.60	.24
2	.03	1.88	.11
3	-.14	1.02	.01
4	-.12	1.17	.14
5	.02	1.09	.08
6	.03	1.37	.23
7	-.03	1.15	.12
8	.17	1.87	.11
9	.14	1.70	.21
10	.06	1.29	.21
11	-.03	1.04	.04
12	.10	1.02	.02
13	.07	1.88	.11
14	-.11	1.44	.25
15	-.02	1.80	.16
16	.23	1.01	.01
17	.24	1.96	.04
18	.13	1.04	.04
19	.12	1.09	.08
20	.06	1.14	.12
21	-.06	1.97	.03
22	.06	1.34	.23
23	-.14	1.93	.06
24	.16	1.82	.15
25	.02	1.68	.22
26	.17	1.37	.24

The results suggest knowledge levels about AIDS are generally quite high. On a positive note, more than 98% of people knew that exchange of body fluids, such as semen and blood, were one of the primary means of passing on AIDS. As well, almost all the respondents knew that use of unsterilized needles could transmit AIDS and that use of a condom would help protect against transmission of the disease. Ninety-six percent of respondents knew that sexual partners of risk groups also ran a high risk of contracting the disease, that AIDS could not be contracted by caring for those infected with the disease, and that babies could be born with the disease. Nearly everyone surveyed knew that AIDS destroyed the body's ability to fight disease.

A few negative aspects are worth noting. Roughly 45% of the sample felt that oral sex was a common means of contracting AIDS. Almost 30% of the sample believed that prostitutes stood the same chance of getting AIDS as anyone else. Twenty-two percent of the sample believed that social contact alone could spread AIDS, whilst 16% did not realize that certain sexual practices carried greater risks than others in passing on AIDS. About 36% of the sample believed that only 20% of those infected with HIV would eventually contract the disease. It is generally accepted that this figure is much higher. Approximately 14% did not believe those who have intercourse with more than one partner were more likely to contract AIDS. A similar percentage of the respondents believed that it was possible to get AIDS from kissing someone with the disease. Slightly over one tenth of the sample felt that AIDS was primarily a homosexual disease. Approximately 9% of the sample felt it was possible to contract AIDS from the seat of a toilet used by an AIDS victim, or from using public washroom facilities. Thirteen percent of the sample incorrectly felt that mutual masturbation was a common means of contracting AIDS. Thirty-four percent of the sample felt that hemophiliacs were not amongst those at risk for the disease, whilst approximately 17% believed that mosquitoes could transmit the disease. Almost 7%

believed that it was not possible to get AIDS from a healthy looking person. Thirty-seven percent of the sample felt that it would not be unlikely that a person could get AIDS from a blood transfusion. Thirty-two percent of the sample felt that discovery of a cure for AIDS was imminent. Available scientific evidence suggests this is not likely for a number of years.

It appears from the results that basic levels of information concerning sexual and intravenous transmission about AIDS is generally adequate as is knowledge of prevention through use of the condom. The nature of the disease is also understood in terms of it attacking the immune system, yet it appears that a relatively large number of people still do hold misconceptions concerning transmission through other routes - in particular that of oral sex and mutual masturbation and to a lesser extent, through social contact. It may be possible that, although very basic information about AIDS has been assimilated, certain specific, yet important, information remains to be assimilated. The results are shown in Table 11.

Table 11

Correct/Incorrect Responses to AIDS Knowledge Scale by Item

Item	% correct	% incorrect
1) The letters AIDS stand for Advanced Immune Deficiency Syndrome (F)	59.5	40.5
2) Social contact has been shown to spread AIDS (F)	87.8	22.2
3) Exchange of body fluids such as semen and blood are the primary means of passing AIDS on (T)	98.5	1.5
4) Certain sexual practices carry a greater risk of passing on AIDS than others (T)	83.2	16.8
5) Over five million people worldwide may be infected with the HIV virus (T)	90.8	9.2
6) The HIV virus causes AIDS, but only about twenty percent of those who have the virus develop AIDS (F)	63.4	36.6

continued

(Table 11 continued)

7) People who have intercourse with more than one partner are more likely to get AIDS (T)	85.5	14.5
8) A person can get AIDS from kissing an AIDS victim (F)	87.0	13.0
9) Prostitutes stand the same chance of getting Aids as anybody else (F)	70.2	29.8
10) Most AIDS cases in Africa are a result of heterosexual transmission (T)	71.0	29.0
11) A person can get AIDS from intravenous injections with unsterilized needles (T)	96.2	3.8
12) Using a condom during sexual intercourse reduces the risk of getting AIDS(T)	97.7	2.3
13) Nearly all the recorded AIDS cases in the world result from homosexual transmission (F)	87.8	12.2
14) Oral sex (touching another persons sexual parts with ones mouth) is not a common way of getting AIDS (T)	55.7	44.3
15) Indulging in heterosexual anal intercourse does not increase the risk of contracting or passing on AIDS (F)	80.2	19.8
16) AIDS makes a person ill because it destroys the bodies ability to fight disease (T)	99.8	.2
17) A person can get AIDS from feeding and caring for an AIDS victim (F)	96.2	3.8
18) Babies can be born with AIDS (F)	96.2	3.8
19) It is not possible to get AIDS from the seat of a toilet used by an AIDS victim or from using public washroom facilities (T)	90.8	9.2
20) Mutual masturbation is not a common way of getting AIDS (T)	86.3	13.7
21) Sexual partners of those in AIDS high risk groups do not run a great risk of getting AIDS themselves (F)	96.9	3.1
22) Hemophiliacs should be considered amongst those at high risk of getting or passing on AIDS (T)	65.6	34.4
23) It is not possible to get AIDS from a healthy looking person (F)	93.1	6.9
24) Mosquitoes and other insects can transmit AIDS to human beings (F)	82.4	17.6
25) Discovery of a cure for AIDS is imminent (F)	67.9	32.1
26) It is unlikely that a person will get AIDS from a blood transfusion in Canada (T)	62.6	37.4

Open Ended Knowledge Questions

Additional information was obtained through use of open-ended questions Respondents were asked to list four precautions that can be taken to prevent the transmission of AIDS.

Sixty-six percent of the sample were able to correctly provide four possible precautions that could be taken to prevent the transmission of the disease. Twenty-three percent of the sample were able to correctly provide three out of four possible precautions, whilst 9% of the sample provided only two correct responses out of the four requested. Only two individuals in the study could not correctly identify any precautions against the transmission of the disease.

Correct responses received included use of the condom, cited by 89% of the sample, monogamy or single sexual partners, cited by 52% of the sample, either sterilization of needles before drug use, not sharing needles or avoidance of intravenous drugs, cited by 60% of the sample and abstinence, celibacy or 'saying no', cited by 47% of the sample. Twenty-four percent of the respondents maintained that knowledge of sexual partners history was an important means of preventing the disease, whereas 21% of the sample advocated limitation or reduction of the number of sexual partners and avoidance of casual sex. Twenty-four percent of the responses dealt with avoidance of high risk practices, activities and groups. Eight percent advocated use of safe sex practices, whilst a similar number stressed specific education strategies. The same number of respondents noted that blood should be screened before transfusion. Eight percent suggested avoidance of homosexual sexual intercourse and the same percentage advocated for sexual partners being tested before sexual intercourse. A small proportion, about 4%, advised use of rubber gloves if blood was to be handled.

Responses that were regarded as incorrect included vague statements about being aware, seeing doctors for regular checkups and discussing the topic with partners. Self-examination, cleanliness, and avoidance of wet kisses were also cited as means of preventing transmission and regarded as unacceptable responses.

Factor Structure

The factorial structure of the AIDS Knowledge Scale was investigated using the University of Alberta, Division of Educational Research, Fact 20 program which is a more appropriate program than SPSSx for data that appears in a dichotomous form and uses tetrachoric correlations. Principal axis solutions followed by orthogonal varimax, equamax, quartimax rotations and oblique oblimin rotations for two to five factors were examined. Generally, factor loadings proved to be too low to warrant any conclusions to be made concerning factor structure. This finding is consistent with the low internal consistency of the scale in general. The unrotated factor matrix appears in Appendix B.

Sex Knowledge Questionnaire

The internal consistency coefficient (alpha coefficient) for this scale was .35 and appear in Table 5. Item total correlations ranged from -.03 to .21. Spearman-Brown split-half reliability was .22. These results appear in Table 6. The internal consistency of this scale is also low, contrary to Gough's (1974) findings.

The factorial structure of the Sex Knowledge Questionnaire was investigated using the Fact 20 program. The program was used with this scale for the same reason as with the AIDS Knowledge Scale. Principal axis solutions followed by orthogonal varimax, equamax, quartimax rotations and oblique oblimin rotations for two to five factors were examined. As with the AIDS Knowledge Scale item and factor loadings

proved to be too low to enable meaningful interpretation. The unrotated factor matrix appears in Appendix B.

The scores obtained on this scale were compared with the means obtained by Gough (1974) in deriving a 24 item version of the original scale. These are shown in Table 12. Gough found a small difference of 1.04 existed in scores between male and female means which was significant at the $p <, .01$ level ($n = 355$, $t = 2.68$, $p \leq .01$). The results obtained during this study appear to be consistent with Gough's findings since similar differences in males and females scores were found (see Table 19). The results are discussed in the section examining sex differences which follows. Reliability estimates obtained in this study, are clearly much lower than those obtained by Gough.

Table 12

Sex Knowledge Questionnaire Scores in Two Different Samples

Sample	Country	Reported By	N	Mean	SD
Male University Students	Canada	Present Study (Wilson, 1990)	56	16.07	2.66
Female University Students			75	17.16	2.38
Male Adults, Students	USA	Gough (1974)	209	15.51	3.77
Female Adults, Students			146	16.55	3.47

Cognitive Complexity Scale

The internal consistency coefficient (alpha coefficient) for this scale was .27. Item total correlations ranged from -.08 to .27. Split-half Spearman-Brown reliability was .28. Results appear in Table 5, and 6, respectively. Given the comparative shortness of this scale, such reliability figures are not surprising, but this does place limits on the scale's usefulness as a research instrument.

AIDS Attitude Scale

The internal consistency coefficient (alpha coefficient) for this scale was .89. Results appear in Table 5. Item-total correlations ranged from -.38 to .74. On a positive note most of these correlations are significant at the $p < .01$ levels and this combined with the high alpha coefficient suggests that this scale possess acceptable levels of internal consistency. Spearman-Brown split-half reliability was .85 and appear in Table 6. High scores reflect more liberal and less moralistic and punitive attitudes.

Table 13

Psychometric Properties of the AIDS Attitude Scale

Item No	Item Total r	Item Mean	Item Variance	Item Mode
1	.12	5.82	.28	6
2	.32	5.82	.25	6
3	.37	5.88	.17	6
4	-.11	2.97	1.14	3
5	.48	4.78	1.42	6
6	-.01	3.86	2.43	4
7	.12	3.14	2.66	1/4
8	-.21	4.68	2.53	6

continued

(Table 13 continued)

9	.29	5.40	.75	6
10	.39	4.89	1.33	6
11	-.38	4.00	2.62	4
12	.68	3.81	3.39	6
13	.74	3.90	3.13	6
14	.64	5.17	1.39	6
15	.54	3.26	2.59	4
16	.57	3.45	3.13	1/4
17	.60	5.18	1.55	6
18	.52	3.10	2.89	1
19	.58	3.36	3.36	1
20	.59	5.11	1.57	6
21	.43	4.94	2.15	6
22	.59	5.27	1.51	6
23	.42	5.40	.83	6
24	.56	5.54	.71	6
25	.56	4.47	2.53	6
26	.64	4.42	2.74	6
27	.30	4.34	2.50	6
28	.53	4.70	1.90	6
29	.41	3.70	2.14	3
30	.40	3.49	3.02	6
31	.49	3.59	3.00	6
32	.59	4.83	1.45	6
33	.74	4.93	1.80	6
34	.72	4.85	1.79	6
35	.72	4.97	1.61	6
36	.67	4.81	1.63	6
37	.34	5.66	.43	6
38	.48	5.15	1.35	6
39	.41	5.45	1.14	6
40	.08	3.45	3.65	1
41	.05	5.46	1.25	6
42	.10	3.26	3.33	6

In order to simplify descriptive analysis of this scale, the six item Likert scale was condensed into dichotomous categories. The first category consisted, therefore, of the strongly agree, moderately agree and slightly agree categories and was labelled an agree category, whilst the second category consisted of strongly disagree, moderately disagree and slightly disagree and was labelled a disagree category.

These results suggest that, in general, most of the sample responded in somewhat liberal fashion to the various items. There was overwhelming agreement concerning the seriousness of the disease, belief in the need to find a cure and absolute belief in the importance of education to combat the disease. More than 97% of the sample felt that there was a real need to spend money on AIDS research, but only 88 1/2% of the respondents felt that there was a similar need to spend money on treating those with the disease. Ninety-four percent of the sample regarded AIDS as a frightening disease. The majority of respondents felt that education would be a more effective method of combating AIDS than punitive measures, although 17% of the sample felt that the latter approach would be more viable. People generally felt that education campaigns had been successful, although more than 22% of the respondents disputed this. Forty-five percent of respondents felt that education campaigns had changed their lifestyle and sexual habits. The rest of the sample did not, but this figure needs to be interpreted cautiously since many respondents who did not endorse this item may have felt their lifestyle need not be changed. This issue is dealt with more fully at the end of this section.

The issue of whether sexually explicit information should be provided to all ages if it would educate them, proved to be divisive and contentious. Approximately 59% of the people felt it was a good idea, whereas the remainder disagreed with this stance.

Forty-two percent and 37% of respondents believed that homosexuality was wrong for religious and moral reasons respectively. About half of the respondents

also maintained that promiscuity was wrong for these reasons. Sixty-one percent and 55% of the respondents respectively felt that prostitution was wrong for these same reasons. Almost 30% of respondents felt AIDS demonstrated that sexual permissiveness was wrong, whilst 28% believed that AIDS would not have happened if traditional religious values had been followed.

A surprising 18% of responses indicated that those with AIDS had only themselves to blame. Ten percent felt that AIDS was God's punishment for sexual wrong doing, but only 2% felt that only deviants (drug addicts, prostitutes and homosexuals) contracted AIDS. Between nine and 13% of respondents felt that prostitutes, homosexuals, and the promiscuous deserved to get AIDS. Fifteen percent of the sample felt intravenous drug users should be punished for spreading AIDS. Similar percentages believed that prostitutes, homosexuals, promiscuous and drug users should be punished because they spread AIDS. A tenth of the sample endorsed the belief that isolation or quarantine of AIDS victims by the state was acceptable. Twenty percent of the sample felt that employers should be allowed to dismiss AIDS victims. With regard to testing for AIDS, about half the sample maintained that compulsory AIDS tests were justified, no-one had the right to refuse AIDS tests and that doctors should disclose results of such tests to appropriate authorities. Over 99% of the sample disagreed with the statement that use of the condom for any reasons was wrong, but 5% of the sample maintained that they would never use the condom for any reasons. Only 11% of the sample felt that encouraging the use of the condom would lead to greater promiscuity.

Forty-five percent of the people feel that the threat of AIDS had not caused them to change their behavior - the reservation stated earlier concerning perceived need for behavior change still applies. Significantly over 60% of respondents felt that if

they were drunk they would be less likely to take precautions against the disease. These results appear in Table 14.

Responses for items 8 and 40 were combined in such a manner as to enable a count of those people who felt that their behavior, in the past, had put them at risk of contracting AIDS, yet they still felt that they had not changed their behaviors in any way. This group of ten individuals amounted to approximately 7 1/2% of the sample. Of this group only three were males and seven were females. A further 20% of the sample felt that their behaviors may have put themselves at risk, but noted that they had modified their behaviors. Of this group, half were males and half were females, but it should be noted that there are more females than males in the overall sample. Seventy-two percent of the sample felt that their behaviors had never placed them at risk, but of this cohort, approximately half felt that they had still changed their behaviors as a result of the disease.

Table 14

Percentage Responses to AIDS Attitude Scale

Item	Strongly to Slightly Agree %	Strongly to Slightly Disagree %
1) AIDS is a very serious problem	98.2	0.8
2) It is very important to find a cure or a vaccine for AIDS	98.2	0.8
3) It is imperative that people are educated about the threat of AIDS		
4) Education campaigns against AIDS have been successful	77.1	22.9
5) Punitive measures will be more effective in combating AIDS than education strategies	17.6	82.4
6) Sexually explicit information should be provided to all ages if it will educate them	59.5	40.5
7) AIDS education campaigns have really changed my lifestyle and my sexual habits	45.0	55.0
8) My sexual habits have never put me at risk of contracting AIDS	72.5	27.5
9) There is a very great need to spend money on AIDS research	97.7	2.3
10) There is a great need to spend money treating AIDS victims	88.5	11.5
11) Remaining faithful to one sexual partner is the solution to the AIDS problem	67.7	32.3
12) Homosexuality is wrong for religious reasons	42.0	58.0
13) Homosexuality is wrong for moral reasons	37.7	62.3
14) Homosexuals deserve to get AIDS	9.9	80.1
15) Promiscuity is wrong for moral reasons	52.7	47.3
16) Promiscuity is wrong for religious reasons	50.4	49.6
17) The promiscuous deserve to get AIDS	11.5	88.5
18) Prostitution is wrong for moral reasons	61.8	38.2
19) Prostitution is wrong for religious reasons	55.0	45.0
20) Prostitutes deserve to get AIDS	12.2	87.8
21) Anyone with AIDS has only themself to blame	18.3	81.7
22) AIDS is God's punishment for sexual wrong	10.7	89.3
23) AIDS is largely limited to poorer less economically developed nations	2.3	97.7

continued

(Table 14 continued)

24) Only deviants get AIDS (e.g., drug addicts, prostitutes,homosexuals)	2.3	97.7
25) AIDS shows sexual permissiveness is wrong	29.8	70.2
26) AIDS would not have happened if traditional religious values had been followed by man	28.2	71.8
27) Other people might catch AIDS, but not me	29.8	70.2
28) Employers should be allowed to dismiss AIDS victims	20.0	80.0
29) Governments should be entitled to perform compulsory AIDS tests	46.6	53.4
30) No-one has the right to refuse an AIDS test	51.9	48.1
31) Doctors should disclose the results of AIDS tests to the appropriate authorities	49.6	50.4
32) AIDS victims should be isolated or quarantined from society by the state	10.7	89.3
33) Homosexuality should be severely punished because it spreads AIDS	12.2	87.7
34) Prostitution should be severely punished because it spreads AIDS	13.7	86.3
35) Promiscuity should be severely punished because it spreads AIDS	13.0	87.0
36) Intravenous drug users should be severely punished because they spread AIDS	15.3	84.7
37) The use of condoms is not right	0.8	99.2
38) The encouragement of condoms as a means of prevention of AIDS will only lead to greater promiscuity, especially amongst the young	11.5	88.5
39) I personally would never use the condom any reasons	5.3	84.7
40) AIDS has not made me change my sexual behavior	45.8	54.2
41) Aids is an exceptionally frightening disease	93.9	6.1
42) Alcohol lowers inhibitions and thus, if I were drunk I would be less likely to take precautions against AIDS	62.6	37.4

The factorial structure of the AIDS Attitude Scale was investigated in order to ascertain whether the theoretical dimensions of attitudes to AIDS identified previously in this study could be confirmed empirically. Principal component solutions followed by orthogonal varimax, equamax, quartimax rotations and oblique oblimin rotations for three to eleven factors were examined. Loadings exceeding .30 on the rotated factors were interpreted.

All seven of these factors yielded eigenvalues greater than unity. The eigenvalues were 11.9, 4.0, 3.1, 1.9, 1.6, 1.5 and 1.5 respectively. In total, these factors explained 60.4% of the total variance in AIDS Attitude Scale scores.

A seven factor varimax solution was considered to be the most suitable and psychologically meaningful. The unrotated principal components factor matrix is reported in Table 15, and the varimax rotated solution appears in Table 16. The factor content and dimensions are also discussed.

Table 15

AIDS Attitude Scale Unrotated Principal Component Factor Loadings

Variable	Factor Loading							
	1	2	3	4	5	6	7	Communality
33	.85	-.11	.25	-.19	.04	.04	.04	.84
34	.84	-.10	-.33	.18	-.01	-.05	-.02	.86
35	.83	-.06	.33	-.19	.04	-.05	.00	.83
36	.78	-.11	.28	-.22	-.02	.03	.10	.76
13	.76	.16	-.14	-.11	-.13	.07	-.24	.71
14	.73	-.12	.25	-.15	-.23	.09	-.06	.70
20	.72	-.02	.47	-.15	-.05	-.14	-.13	.81
17	.71	-.07	.42	-.19	-.12	-.10	-.17	.78
26	.70	.16	-.03	.03	.16	.05	-.05	.55
12	.69	.33	-.27	-.18	.04	-.01	-.22	.73
32	.65	-.15	.02	-.04	-.19	.32	.29	.67
19	.63	.50	-.24	-.04	-.06	-.29	-.08	.80
24	.61	-.37	-.07	.15	.23	-.15	.27	.68
22	.61	-.08	-.12	.17	.46	-.01	-.06	.63
25	.60	.16	-.16	.01	.36	-.01	.01	.54
28	.59	-.16	.04	.02	-.08	.36	.26	.58
16	.60	.51	-.25	.02	-.08	-.21	-.09	.74

continued

(Table 15 continued)

5	.56	.04	.24	.31	.07	-.06	.06	.48
15	.56	.47	-.30	-.14	-.03	-.06	-.08	.65
38	.53	-.27	-.15	.37	.12	-.07	.17	.57
31	.52	.22	.01	.31	-.28	.23	-.12	.55
23	.52	-.31	.19	.08	.30	-.26	.05	.56
21	.46	-.30	-.04	.04	.09	.30	.14	.42
39	.43	-.11	-.34	.17	.02	-.05	.08	.35
11	.40	.21	.03	-.09	.38	.23	-.08	.41
27	.32	-.07	.32	.13	-.08	.12	-.00	.25
18	.56	.54	-.26	-.11	-.02	-.16	-.04	.71
2	-.31	.55	.33	-.03	.25	.08	-.03	.59
1	-.08	.52	.31	.02	.29	.00	.38	.60
3	-.34	.52	.33	-.01	.20	.07	.25	.60
37	.36	-.50	-.07	.21	.16	-.33	.02	.56
9	-.27	.49	.32	.04	.15	.12	.17	.48
10	-.41	.45	.25	.02	.23	-.11	-.10	.51
41	.05	.47	-.00	.03	-.10	-.02	.39	.39
40	.02	.12	-.69	-.24	.10	.27	.03	.63
7	-.09	.07	.57	.42	-.21	-.21	-.08	.61
6	.03	.26	.33	-.08	-.25	.35	-.18	.40
29	.44	.22	-.02	.65	-.13	.25	-.02	.74
30	.44	.38	-.06	.56	-.19	.07	.02	.69
4	-.13	-.00	.05	.28	.25	.05	-.66	.59
8	.20	.30	-.31	-.10	-.12	-.27	.30	.41
42	.09	-.13	.02	-.06	.43	.46	-.15	.45
% Common Variance	46.86	15.62	12.05	7.37	6.44	5.85	5.82	100.00
% Total Variance	28.30	9.43	7.27	4.45	3.89	3.53	3.52	60.39

Table 16

AIDS Attitude Scale Seven Factor Varimax Rotated Solution

Variable	Factor Loading							
	1	2	3	4	5	6	7	Communality
34	.87	.22	-.08	.08	.19	.08	.06	.86
20	.86	.19	.01	.06	.09	-.10	-.10	.81
35	.85	.25	-.05	.07	.19	.09	.04	.83
17	.85	.18	-.10	.05	.03	-.08	.09	.78
33	.83	.23	-.15	.12	.14	.14	.12	.84
36	.80	.19	-.10	.07	.14	.13	.16	.76
14	.76	.16	-.24	.18	.03	.04	.08	.70
32	.52	.08	-.25	.32	.04	.26	.41	.67
28	.46	.02	-.19	.34	.08	.33	.33	.58
5	.45	.12	.09	.39	.31	-.04	-.04	.48
19	.25	.83	.02	.16	.10	-.10	.04	.80
16	.20	.80	.01	.23	.06	-.06	.03	.74
18	.20	.80	.07	.13	.02	.02	.09	.71
15	.19	.76	-.01	.13	-.03	.11	.07	.65
12	.33	.74	-.12	.10	.01	.21	-.05	.73
13	.48	.57	-.27	.22	-.04	.15	-.05	.71
25	.28	.47	.04	.12	.35	.32	-.05	.54
8	-.07	.47	.02	-.02	.11	-.15	.38	.41
26	.44	.44	-.01	.25	.22	.24	-.03	.55
1	.01	.07	.74	.03	.05	.03	.19	.60
3	-.13	-.06	.74	-.03	-.16	.01	.10	.60
2	-.12	.01	.70	.00	-.21	.02	-.18	.59
9	-.09	-.04	.66	.06	-.18	.00	.04	.48
10	-.23	.01	.59	-.13	-.14	-.13	-.24	.51
27	.01	.21	-.31	.25	.11	.16	.09	.25
29	.10	.17	.01	.83	.10	.05	-.06	.74
30	.08	.35	.08	.74	.08	-.10	.02	.69

continued

(Table 16 continued)

31	.28	.28	-.11	.61	-.12	.02	-.02	.55
24	.37	.06	-.23	.12	.64	.14	.17	.68
37	.21	-.05	-.35	.02	.61	-.08	-.08	.56
23	.48	.01	-.08	-.01	.57	.02	-.09	.56
38	.20	.08	-.26	.36	.56	.09	.09	.57
22	.29	.29	-.06	.17	.52	.36	-.17	.63
6	.25	-.04	.17	.19	-.52	.03	-.08	.40
39	.06	.27	-.31	.23	.32	.11	.12	.57
42	.09	-.13	.04	.01	.03	.61	-.21	.45
7	.18	-.28	.27	.31	-.01	-.53	-.23	.61
40	-.36	.38	-.24	-.10	-.10	.48	.20	.63
11	.27	.27	.20	.07	.09	.44	-.12	.41
21	.33	-.06	-.24	.21	.20	.38	.15	.42
4	-.13	-.03	-.01	.11	-.02	.07	-.74	.59
41	-.05	.26	.36	.17	-.06	-.10	.39	.39
% Common Variance	29.40	20.56	13.90	11.13	10.74	7.81	6.48	100.00
% Total Variance	17.76	12.41	8.39	6.72	6.48	4.71	3.91	60.39

Factor 1

Factor 1 was defined by the items listed below, and accounted for 17.8% of the total variance. The characteristics reflected by this factor deal with attitudes towards those with the disease and the use of either educative (liberal) strategies as opposed to punitive or illiberal strategies in countering the disease. Overall, this factor may reflect a compassionate versus punitive solutions orientation to the disease. Culpability and blameworthiness of individuals at risk for AIDS is also reflected in this factor. (Culpability/Punitive Solutions Factor)

Item	Factor Loading
34) Prostitution should be severely punished because it spreads AIDS	.87
20) Prostitutes deserve to get AIDS	.86
35) Promiscuity should be severely punished because it spreads AIDS	.85
17) The promiscuous deserve to get AIDS	.85
33) Homosexuality should be severely punished because it spreads AIDS	.83
36) Intravenous drug users should be severely punished because they spread AIDS	.80
14) Homosexuals deserve to get AIDS	.76
32) AIDS victims should be isolated or quarantined from society by the state	.52
28) Employers should be allowed to dismiss AIDS victims	.46
5) Punitive measures will be more effective in combating AIDS than education strategies	.45

Factor 2

Factor 2 accounted for 12.4% of the total variance and was defined by the items listed below. This factor reflects personal religious, moral and sexual values. (Religiosity, Morality, Conventionality Factor)

Item	Factor Loading
19) Prostitution is wrong for religious reasons	.83
16) Promiscuity is wrong for religious reasons	.80
18) Prostitution is wrong for moral reasons	.80
15) Promiscuity is wrong for moral reasons	.76
12) Homosexuality is wrong for religious reasons	.74
13) Homosexuality is wrong for moral reasons	.57
25) AIDS shows sexual permissiveness is wrong	.47
8) My sexual habits have never put me at risk of contracting AIDS	.47
26) AIDS would not have happened if traditional religious values had been followed by man	.44

Factor 3

Factor 3 accounted for 8.4% of the total variance. This factor clearly reflects the perceived seriousness of AIDS and the need for its resolution. Items which load on this factor are shown below. (Education, Research, Treatment Factor)

Item	Factor Loading
1) AIDS is a very serious problem	.74
3) It is imperative that people are educated about the threat of AIDS	.74
2) It is very important to find a cure or a vaccine for AIDS	.70
9) There is a very great need to spend money on AIDS research	.65
10) There is a great need to spend money treating AIDS victims	.59
27) Other people might catch AIDS, but not me	.31

Factor 4

The fourth factor clearly reflects attitudes towards AIDS testing. Factor 4 accounted for 6.7% of the total variance. Item and factor loadings for this factor appear below. (AIDS Testing Factor)

Item	Factor Loading
29) Governments should be entitled to perform compulsory AIDS tests	.83
30) No-one has the right to refuse an AIDS test	.74
31) Doctors should disclose the results of AIDS tests to the appropriate authorities	.61

Factor 5

Factor 5 accounted for almost 6 1/2% of the total variance and the items that load on this factor appear below. Although not immediately clear, this factor reflects certain absolute values or standpoints, and possible misconceptions related to the disease. (Absolute Beliefs Factor)

Item	Factor Loading
24) Only deviants get AIDS (e.g., drug addicts, prostitutes, homosexuals)	.64
37) The use of condoms is not right	.61
23) AIDS is largely limited to poorer less economically developed nations	.57
38) The encouragement of condoms as a means of prevention of AIDS will only lead to greater promiscuity, especially amongst the young	.56
22) AIDS is God's punishment for sexual wrong	.52
6) Sexually explicit information should be provided to all ages if it will educate them	.52
39) I personally would never use the condom for any reasons	.32

Factor 6

Factor 6 was defined by the items listed below, which accounted for 4.7% of the total variance. This factor reflects attitudes towards behaviors and changes consequent to the disease. (Behavior Change Factor)

Item	Factor Loading
42) Alcohol lowers inhibitions and thus if I were drunk I would be less likely to take precautions against AIDS	.61
7) AIDS education campaigns have really changed my lifestyle and my sexual habits	.53
40) AIDS has not made me change my sexual behavior	.48
11) Remaining faithful to one sexual partner is the solution to the AIDS problem	.44
21) Anyone with AIDS has only themself to blame	.38

Factor 7

Factor 7 was defined by only two items, which accounted for 3.9% of the total variance. This factor is not easily interpreted, but possibly deals with the impact of AIDS on the individual (AIDS Impact Factor).

Item	Factor Loading
4) Education campaigns against AIDS have been successful	.74
41) Aids is an exceptionally frightening disease	.39

Factor analysis of this scale identified a number of factors that appeared to be psychologically meaningful and lend support to the multidimensionality of this scale. In much the same way as the Sexual Opinion Survey might yield useful data when the subscales are computed, the same may apply to the AIDS Attitude Scale.

General Open-Ended Questions

Question 1 - Do you feel AIDS has led to a change in your own sexual behavior, either in terms of frequency of sexual intercourse, number of sexual partners, or use of the condom itself? Please comment.

Twenty-eight percent of the sample felt that their behaviors had changed, maintaining that awareness of dangers had increased. A number of people felt that their behaviors had not changed, because they felt their behaviors did not put them at risk. Reasons for this included being in faithful monogamous relationships, not being sexually permissive, having a constant number of sexual partners, and not considering themselves to be within risk groups. One individual noted not feeling much at risk with the partners chosen. A small percentage of the sample maintained that they no longer thought of having extra-marital relationships. Five percent of the sample maintained that they were not sexually active. Others conceded their awareness had risen, even though they did not consider themselves at risk. A few people stated they would no longer have casual sex or "one night stands" or that they would be more cautious. A number of people maintained they now stayed faithful in relationships or ensured that they knew their new partners sexual history. Five percent of the sample maintained that they had become more selective and a similar percentage maintained they had reduced their number of partners and used precautions. One person felt testing their partner before having sex was the solution. Finally, a couple of respondents maintained that their attitudes had changed, but felt their behaviors were not an issue at the moment. In all, 87% of the sample responded to this question.

Question 2 - Have education campaigns increased your awareness or knowledge about AIDS? Please comment.

Nine percent of the sample maintained that their level of awareness had not increased as a result of education campaigns. A number of respondents maintained that they had obtained information from newspapers and magazines. Two individuals in the sample claimed not to have seen any educational campaigns. One individual claimed that campaigns tended to scare people, whilst another respondent criticized campaigns for only promoting condom use. Seventy-nine percent of the sample felt education campaigns had increased awareness or knowledge, although a large proportion of these people felt there was a great need to still know more. Eight percent of the sample felt education campaigns had taught them how AIDS is transmitted. A similar number maintained they had learned how to prevent the transmission of AIDS. A small group, roughly 3%, within the sample felt education received on campus was particularly useful. Pamphlets and television were cited by a number of respondents as sources of information. A small percentage felt that the media tended to confuse issues, and a small number of individuals stressed the need for aiming education campaigns at young people. A continual theme that emerged from this question appeared to be a firm belief in the vital need for education to combat the disease. Eighty-nine percent of the sample offered responses to this question.

Question 3 - Have you found any of the questions in this study difficult to understand? Please comment.

Of the individuals who answered this question 32% felt that they did have some difficulties in responding to some parts of the study. Included in this group were those who maintained that they experienced difficulties with meanings of certain words e.g., promiscuity, hemophiliacs, and finding correct answers to some of the

knowledge oriented questions. Other respondents felt that they experienced difficulties in making up their minds, and being completely honest. Eight percent of the total sample felt certain items were ambiguous. In particular it was felt by a number of respondents that the Cognitive Complexity Scale (ITI) did not have much face validity in terms of the stated purpose of the study. However, approximately 50% of the sample maintained that they had no difficulty with any of the questions. Overall, 82% of the sample responded to this question.

Question 4 - Have you found any of the questions in this study offensive? Please comment.

Ten percent of respondents reported being offended by some aspect of the questions asked. Reasons cited generally involved questions on the Sexual Opinion Survey relating to sexual preferences and masturbation. In addition, a few people questioned the relevance of the scale measuring cognitive complexity (ITI) to a study on AIDS. However, positive comments were received from 67% of the total sample. Their comments included statements maintaining that questions asked were thought-provoking and necessary. Many felt that it was essential and for a good cause, i.e., research, and felt that honesty was needed in order to discover areas where people needed to be educated. A number of respondents were grateful that the study was anonymous, commenting that they found many questions very personal and embarrassing, but not offensive. One female respondent felt questions about female birth control methods and sexuality would be hard for males to answer, whilst another felt sex was a natural thing that could be talked about openly. A couple of people felt that the study reflected reality. One individual thought some questions were possibly narrow minded, but conceded that they probably did have a purpose. No-one stated being seriously offended by the survey. It should be noted that, in total,

over 78% of the sample responded to this open ended section, which provides support for the belief that the study was treated with deliberation and seriousness, and hence, can be considered valid.

Question 5 - Any other remarks, criticisms or suggestions

Respondents were asked if they had any further comments to add. A number conceded that the use of double negatives forced them to be careful in responding, particularly when dealing with true/false questions. A few found the questions unclear and ambiguous. A couple of people expressed the desire to have answers explained; this opportunity was in fact made available to them on completion of the questionnaire. A number of people maintained that the study was concise, very clear, and well written, but approximately 9% of the sample felt that the survey was very long and they may have needed more time to complete it. A few felt they did not know all the answers and one individual commented that the survey made them realize how little they really knew. One individual stressed the importance of receiving feedback on the results of this survey - a sobering reminder of the obligations of a researcher. In all, approximately half of the total sample offered responses to this question and overall the impression gained from these responses tend to indicate the study was worthwhile and a useful exercise, even in the instances where people did feel there were some shortcomings with the study - all factors which support the seriousness and sense of responsibility with which the topic was treated.

Hypotheses

Hypothesis 1:

Hypothesis 1:1. It was hypothesized that erotophilia would be significantly positively correlated with scores on the Sex Knowledge Questionnaire. This hypothesis received no support. The Pearson correlation calculated was .14 ($n = 128$, $p = .06$, one-tailed). Therefore, the hypothesis was rejected. The results appear in Table 17.

Hypothesis 1:2. It was hypothesized that erotophilia would be significantly positively correlated with scores on the AIDS Knowledge Scale. This hypothesis received no support. The Pearson correlation calculated between these two measures was .02 ($n = 131$, $p = .393$, one-tailed). The hypothesis was rejected. The results appear in Table 17.

Hypothesis 1:3. It was hypothesized that erotophilia would be significantly positively correlated with a number of liberal attitudes towards AIDS The Pearson correlation between erotophilia and the AIDS Attitude Scale was .34 ($n = 125$, $p = .000$, one-tailed). The hypothesis was thus accepted at the $p < .01$ level. The results appear in Table 17.

In addition, given the apparent robustness of this scale and its factor structure. Factor III - that of "homophobia" was correlated with the AIDS Attitude Scale. The Pearson Correlation calculated was .46 ($n = 127$, $p = .000$, one-tailed). This result is significant at the $p < .01$ level.

Hypothesis 1:4. It was hypothesized that erotophilia would be significantly positively correlated with cognitive complexity. This hypothesis received no support. The Pearson correlations calculated between erotophilia and levels of cognitive complexity was .044 ($n = 128$, $p = .311$, one-tailed), . The results appear in Table 17.

Hypothesis 1:5. It was hypothesized that erotophilia would be significantly negatively correlated with authoritarianism. This hypothesis received no support. The Pearson correlation between erotophilia and authoritarianism was .11 (n = 128, p =.101, one-tailed). The hypothesis was rejected. The results appear in Table 17.

Table 17

Pearson Product Moment Intercorrelations Between Measures

Variables	1	2	3	4	5	6	7
Social Desirability	--						
F Scale	.00	--					
Sexual Opinion Survey (SOS)	-.06	.11	--				
Sex Knowledge Questionnaire	.03	-.42**	.14	--			
AIDS Knowledge Scale	-.03	-.31**	.02	.30**	--		
Cognitive Complexity Scale (ITI)	.18*	.27**	.04	.14	.14	--	
AIDS Attitude Scale	.18*	-.52**	.34**	.40**	.17*	.20*	--

*p < .05. **p < .01.

Hypothesis 2:

Hypothesis 2:1. It was hypothesized that authoritarianism would be significantly negatively correlated with levels of cognitive complexity. This hypothesis received support. The Pearson correlation between authoritarianism and cognitive complexity was - .27 (n = 131, p = .001, one-tailed). The hypothesis was thus accepted at the p < .01 level. The results appear in Table 17.

Hypothesis 2:2. It was hypothesized that authoritarianism would be significantly negatively correlated with scores on the Sex Knowledge Questionnaire. This hypothesis received support. The Pearson correlation calculated between authoritarianism and levels of knowledge about sex was -.42 (n = 131, p = .000,

one-tailed). The hypothesis was thus accepted at the $p < .01$ level. The results appear in Table 17.

Hypothesis 2:3. It was hypothesized that authoritarianism would be significantly negatively correlated with scores on the AIDS Knowledge Scale. This hypothesis received support and the Pearson correlation calculated between these two scales was -.31 ($n = 131$, $p = .000$, one-tailed). The hypothesis was thus accepted at the $p < .01$ level. The results appear in Table 17.

Hypothesis 2:4. It was hypothesized that authoritarianism would be significantly negatively correlated with a number of liberal attitudes related to AIDS. The Pearson correlation calculated between authoritarianism and attitudes concerning AIDS was -.52 ($n = 128$, $p = .000$, one-tailed). The hypothesis was thus accepted at the $p < .01$ level. The results are displayed in Table 17.

Dimensions of AIDS Attitude Scale

Factor 1 of the Attitudes to AIDS scale dealt with punitive attitudes towards AIDS. This scale and the F Scale correlated highly ($n = 130$, $r = .52$, $p = .000$, one-tailed). Therefore, the relationship was significant at the $p < .01$ level. The results appear in Table 18.

Factor 2 reflected a concern with religious, moral and sexual values and again correlated with the measure of authoritarianism. ($n = 130$, $r = .49$, $p = .000$, one-tailed). The relationship the hypothesis was significant at the $p < .01$ level. The results appear in Table 18.

Factor 3, which reflected concerns with education, research and treatment, appeared to be unrelated to the measure of authoritarianism. The Pearson correlation calculated between these two measures was .08 ($n = 131$, $p = .188$, one-tailed). This relationship is not significant. The results are shown in Table 18.

Factor 4 , which reflected attitudes to AIDS testing, was highly correlated with the F Scale. The Pearson correlation was .43 (n = 131, p = .000, one-tailed). This relationship was significant at the $p < .01$ level. The results are shown in Table 18.

Factor 5, which reflected beliefs, correlated significantly with the F Scale at the $p < .01$ level. The Pearson correlation was .28 (n = 131, p = .001, one-tailed). The results are shown in Table 18.

Factor 6, which reflected behaviors, did not appear to be related to the F Scale. The Pearson correlation was -.03 (n = 130, p = .353, one-tailed). This relationship was not significant. The results are shown in Table 18.

Factor 7, which reflected the impact of AIDS did not appear to be related to the F Scale. The Pearson correlation was -.12 (n = 131, p = .092, one-tailed). This relationship is not significant. The results are shown in Table 18.

Table 18

Correlations of Factor of AIDS Attitude Scale with

Authoritarianism (F Scale)

	r	p
AIDS Attitude Scale	.52**	.000
AIDS Attitude Factor 1	.52**	.000
AIDS Attitude Factor 2	.40**	.000
AIDS Attitude Factor 3	.08	.188
AIDS Attitude Factor 4	.43**	.000
AIDS Attitude Factor 5	.28**	.001
AIDS Attitude Factor 6	-.03	.353
AIDS Attitude Factor 7	-.12	.092

*p < .05. **p < .01.

Hypothesis 3:

Hypothesis 3:1. It was hypothesized that cognitive complexity would be significantly positively correlated with scores on the Sex Knowledge Questionnaire. This hypothesis received minimal support. ($n = 131$, $r = .14$, $p = .051$, one-tailed). This relationship was not significant, althogh the correlation approached significance. The results appear in Table 17.

Hypothesis 3:2. It was hypothesized that cognitive complexity would be significantly positively correlated with scores on the AIDS Knowledge Scale. This hypothesis received minimal support ($n = 131$, $r = .14$, $p = .055$, one-tailed). This relationship is not significant, but again did aproach significance. The results appear in Table 17.

Hypothesis 3:3. It was hypothesized that cognitive complexity would be significantly positively correlated with a number of liberal attitudes related to AIDS. This hypothesis received support ($n = 128$, $r = .20$, $p = .013$, one-tailed). This relationship is significant at the $p < .05$ level, but not at the $p < .01$ level. The results appear in Table 17.

Hypothesis 4:

Hypothesis 4. It was hypothesized that levels of knowledge about AIDS would be significantly correlated with a number of liberal attitudes related to AIDS. This hypothesis received only tentative support. Levels of knowledge about AIDS correlated with the AIDS Attitude Scale .173 ($n = 128$, $p = .026$, one-tailed). The hypothesis was thus rejected at the $p < .01$ level, but accepted at the $p < .05$ level. The results appear in Table 17.

Hypothesis 5:

Hypothesis 5:1. It was hypothesized that significant differences would be found between males and females in levels of erotophilia. At the $p < .01$ level, there were significant differences between males and females in levels of erotophilia, $t = 3.99$, ($n = 128$, $df = 126$, $p = .000$, two-tailed). The results appear in Table 19.

Table 19

Means, Standard Deviations and Significance of Differences Between Males and Females on Measures Used in the Study

Measure	Male		Female		t-value	Sig
	M	SD	M	SD		
Sexual Opinion Survey	69.39	16.05	57.10	18.23	3.99	**
AIDS Attitude Scale	183.68	26.95	195.28	22.84	2.63	*
Sexual Knowledge	16.07	2.66	17.16	2.38	2.47	*

n males = 56, n females = 72.

*p < .05, two-tailed. **p < .01, two-tailed.

In addition, t tests were performed on the three empirically derived factors and the rationally derived scale introduced earlier. These results appear in Table 20.

Table 20

Means, Standard Deviations and Significance of Differences

Between Males and Females Sexual Opinion Survey (SOS) Factors

Measure	Male		Female		t-value	Sig
	M	SD	M	SD		
SOS Factor 1	50.25	10.44	38.31	12.33	5.83	**
SOS Factor 2	29.98	5.10	29.18	6.69	0.75	
SOS Factor 3	10.16	4.52	10.73	4.91	0.68	
SOS Promiscuity	11.25	3.89	8.08	4.01	4.54	**

n males = 56. n females = 72.

*p < .05, two-tailed. **p < .01, two-tailed.

There were significant differences in attitudes between males and females at the p < .01 level on Factor 1, which reflected a concern with pornography and sexual display. The calculated t-value was t = 5.83, (n = 130, df = 128, p = .000, two-tailed). The results are shown in Table 20.

There were no significant differences in attitudes between males and females on Factor 2, which reflected sexual fantasy and sexual variety. The calculated t-value was t = 0.75, (n = 130, df = 128, p = .453, two-tailed). The results are shown in Table 20.

There were no significant differences in attitudes between males and females on Factor 3, which reflected comfort with homosexuality in others and intra-personally. The calculated t-value was t = .68, (n = 130, df = 128, p = .500, two-tailed). The results are shown in Table 20.

On the rationally derived scale reflecting attitudes towards long term multiple sex partners, engaging in group sex and unusual sex practices, between males and females, there were significant differences between males and females at the $p < .01$ level. The t-values calculated were 4.54 ($n = 131$, $df = 129$, $p = .000$, two-tailed). The results are shown in Table 20.

Hypothesis 5:2. It was hypothesized that significant differences would be found between males and females in attitudes related to AIDS. There were significant differences between males and females in attitudes towards AIDS at the $p < .01$ level. The t-value calculated was $t = 2.63$ ($n = 128$, $df = 126$, $p = .009$, two-tailed). The results are shown in Table 19.

Comparison of means of males and females on the various factor scores of the AIDS Attitude Scale yielded the following results:

Factor 1 of the Attitudes to AIDS scale dealt with punitive attitudes towards AIDS. Males were significantly more likely to be punitive and place blame than females in their attitudes on this scale at the $p < .01$ level. The t-value calculated was 4.12 ($n = 130$, $df = 128$, $p = .000$, two-tailed). The results appear in Table 21

Factor 2 reflected a concern with religious, moral and sexual values. There were no significant differences in attitudes at the $p < .01$ level. The calculated t-value was $t = .12$ ($n = 130$, $df = 128$, $p = .904$, two-tailed). The results appear in Table 21.

Factor 3 reflected concerns with education, research and treatment. There were no significant differences in attitudes between males and females on this factor. The calculated t-value 1.86 ($n = 131$, $df = 129$, $p = .066$, two-tailed). The results are shown in Table 21.

Factor 4, which reflected attitudes to AIDS testing, did not show significant differences in mean scores between males and females. The calculated t-value was t = .38 (n = 131, df = 129, p = .703, two-tailed). The results are shown in Table 21.

Factor 5, which reflected absolute beliefs, also yielded significant differences at the $p < .05$ level, but not at the $p < .01$ level. The calculated t-value was t = 2.21, (n = 131, df = 129, p = .029, two-tailed). The results are shown in Table 21.

Factor 6, which reflected behaviors, did not show any significant differences in means between males and females (t= 1.38, n = 130, df = 128, p = .170, two-tailed). The results are shown in Table 21.

Factor 7, which reflected the impact of AIDS, also did not appear to be significantly different in terms of mean attitudes between males and females. The calculated t-value was .75 (n = 131, df = 129, p = .455, two-tailed). The results are shown in Table 21.

Table 21

Means, Standard Deviations and Significance of Differences Between Males and Females on AIDS Attitude Factors

Measure	Male		Female		t-value	Sig
	M	SD	M	SD		
AIDS Attitude Factor 1	43.38	10.91	52.30	8.24	4.12	**
AIDS Attitude Factor 2	34.36	9.71	34.58	11.01	0.12	
AIDS Attitude Factor 3	31.54	3.58	32.61	3.05	1.86	
AIDS Attitude Factor 4	35.30	5.34	37.07	3.08	2.21	*
AIDS Attitude Factor 5	10.61	3.99	10.89	4.41	0.38	
AIDS Attitude Factor 6	18.20	4.31	19.23	4.16	1.38	
AIDS Attitude Factor 7	8.30	1.85	8.52	1.46	0.75	

*p < .05, two-tailed. **p < .01, two-tailed.

Hypothesis 6

This set of hypotheses were tested using multiple analysis of variance. Subjects on the F Scale, the Cognitive Complexity Scale (ITI) and the Sexual Opinion Survey (SOS) respectively were classified into two groups - high and low dichotomies. The low group comprised the bottom quartile scores and the high group comprised top quartile score. Mean responses of the high and low scorers on each of the nine individual adjectives of the semantic differential scale used in describing the eight posters were then compared using analysis of variance. For each of the four personality measures 72 F-tests were thus conducted. In general, there were few statistically significant differences found suggesting that levels of erotophobia-erotophilia, authoritarianism, and cognitive complexity did not consistently influence the manner in which individuals responded to posters across all levels of the semantic differential scale. These results are shown in Appendix C.

The mean responses of males and females to the semantic differential scales were also examined using multiple analysis of variance. There were no consistently significant results found across all semantic differential adjectives. The results appear in Appendix C.

Hypothesis 6:1. It was hypothesized that significant differences would be found between erotophobes and erotophiles in reactions to AIDS education posters on all of the semantic differential adjectives. This hypothesis did not receive support. The results appear in Appendix C.

Hypothesis 6:2. It was hypothesized that significant differences would be found between authoritarians and non-authoritarians in reactions to AIDS education posters on all of the semantic differential adjectives. This hypothesis did not receive support. The results appear in Appendix C.

Hypothesis 6:3. It was hypothesized that significant differences would be found between concrete thinkers (low ITI scorers) and abstract thinkers (high ITI scorers) in reactions to AIDS education posters on all of the semantic differential adjectives. This hypothesis received no support. The results are shown in Appendix C.

Hypothesis 6:4. It was hypothesized that significant differences would be found between males and females in reactions to AIDS education posters on all of the semantic differential adjectives. This hypothesis received no support. The results appear in Appendix C.

Differences in Reactions To Individual Posters

Differences in reactions to all posters along each of the nine adjectives of the semantic differential scale were also tested using Multiple Analysis of Variance (MANOVA). The means and standard deviations appear in Table 22.

Table 22

Means and Standard Deviations for Responses to Posters by Semantic Differential Adjective.

Descriptor	Poster 1		Poster 2		Poster 3		Poster 4	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Informative	3.56	1.54	3.52	1.62	1.45	0.78	3.73	1.70
Emotive	3.20	1.35	2.64	1.38	3.60	1.60	2.64	1.29
Suggestive	2.79	1.31	2.16	1.31	4.41	1.43	1.91	1.16
Reassuring	3.41	1.03	4.40	1.91	1.82	0.95	3.60	1.19
Effective	3.69	1.49	3.84	1.54	1.90	1.04	3.68	1.57
Offensive	4.08	1.41	2.40	1.36	5.42	1.01	3.09	1.48
Good	3.40	1.36	4.30	1.34	1.69	0.93	3.74	1.37
Moral	3.29	1.20	4.51	1.16	1.75	0.93	3.86	1.21
Decent	3.08	1.27	4.45	1.14	1.63	0.83	3.90	1.23

continued

(Table 22 continued)

Descriptor	Poster 5		Poster 6		Poster 7		Poster 8	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Informative	3.72	1.69	3.60	1.61	3.84	1.55	2.90	1.47
Emotive	3.01	1.41	3.03	1.39	3.32	1.33	2.91	1.39
Suggestive	2.40	1.33	3.16	1.41	2.64	1.25	4.11	1.45
Reassuring	3.82	1.11	2.87	1.19	4.02	1.06	2.75	1.20
Effective	3.53	1.57	3.22	1.56	3.87	1.37	2.64	1.32
Offensive	3.17	1.57	4.57	1.20	3.18	1.49	5.43	0.87
Good	3.76	1.27	2.88	1.41	4.07	1.22	2.23	1.19
Moral	3.77	1.12	2.65	1.18	3.93	1.29	1.82	0.91
Decent	3.86	1.23	2.62	1.25	3.78	1.31	1.72	0.88

There were significant differences at the $p < .05$ level in mean reactions of the sample to each poster displayed on the basis of the semantic differential adjectives used. Post hoc analysis, using the Scheffe test, was then performed in order to determine which differences in pairs of means were significant.

The first adjective of the semantic differential required the individual to rate the posters along a continuum as to how informative they were. There were significant differences between mean ratings of the posters at the $p < .05$ level. The results appear in Table 23. Post hoc comparisons revealed that two posters were rated more informative than the rest. The most informative poster according to the respondents was clearly the third poster. This was the poster that showed ways in which individuals could avoid contracting the disease and thus attempted to dispel misconceptions about the disease. The eighth poster showed a very timid looking adolescent staring at the viewer and was captioned "Stopping AIDS is up to you". It is possible that this poster was considered informative because it stresses the personal

responsibility in preventing the disease. No other pairs of posters were rated as being significantly different. The results appear in Table 24.

Table 23

MANOVA Summary Results for Responses to Semantic Differential

Adjective - Informative/Uninfomative

Source of Variation	Sum of Squares	df	Mean Square	F	S
Between	564.77	7	80.68	46.92	P < .000
Within	1516.73	882	1.72		
Total	2081.50	889			

Table 24

Significant Differences Between Mean Semantic Differential Ratings

Adjective - Informative/Uninformative

Mean	Poster	1	2	3	4	5	6	7	8
3.56	1	- -							
3.52	2	NS	- -						
1.45	3	*	*	- -					
3.73	4	NS	NS	*	- -				
3.72	5	NS	NS	*	NS	- -			
3.60	6	NS	NS	*	NS	NS	- -		
3.84	7	NS	NS	*	NS	NS	NS	- -	
2.90	8	*	*	*	*	*	*	*	- -

* denotes pairs of means that are significantly different at p <.05 level

The second semantic differential item required the sample to rate posters according to whether they felt that they were emotive or not. There were significant differences between mean ratings of the posters at the $p < .05$ level. The results appear in Table 25. Post hoc comparisons revealed that poster 2, which showed two naked male chests touching each other, was considered to be more emotive than a few of the posters, but no clear differences emerge. The majority of mean responses were not significantly different. The results appear in Table 26.

Table 25

MANOVA Summary Results for responses to Semantic Differential

Adjective - Emotive/Unemotive

Source of Variation	Sum of Squares	df	Mean Square	F	S
Between	95.23	7	13.60	8.10	P < .000
Within	1470.52	875	1.68		
Total	1565.75	882			

Table 26

Significant Differences Between Mean Semantic Differential Ratings

Adjective - Emotive/Unemotive

Mean	Poster	1	2	3	4	5	6	7	8
3.20	1	- -							
2.64	2	NS	- -						
3.60	3	NS	*	- -					
2.64	4	NS	*	NS	- -				
3.01	5	NS	NS	NS	NS	- -			
3.03	6	NS	NS	NS	NS	NS	- -		
3.32	7	NS	*	NS	*	NS	NS	- -	
2.91	8	NS	*	NS	NS	NS	NS	NS	- -

* denotes pairs of means that are significantly different at p <.05 level

The third item of the semantic differential required individuals to rate the posters along a continuum as to how suggestive as opposed to persuasive they were. There were significant differences between mean ratings of the posters at the $p < .05$ level. The results appear in Table 27. Post hoc comparisons revealed that a few of the posters were consistently rated more persuasive than the rest. These posters were the third and the eighth posters respectively; the first depicted how one could not contract the disease and; the second showed an adolescent staring at the viewer and stressing personal responsibility in stopping AIDS. Poster 4, which depicted a semi-clad male in bed and stressed the sensuality of safe sex, was rated as being more suggestive than a number of the posters. The results appear in Table 28.

Table 27

MANOVA Summary Results for Responses to Semantic Differential

Adjective - Suggestive/Persuasive

Source of Variation	Sum of Squares	df	Mean Square	F	S
Between	713.24	7	101.89	61.74	P < .000
Within	1444.14	875	1.65		
Total	2157.38	882			

Table 28

Significant Differences Between Mean Semantic Differential Ratings

Adjective - Suggestive/Persuasive

Mean	Poster	1	2	3	4	5	6	7	8
2.79	1	- -							
2.16	2	*	- -						
4.41	3	*	*	- -					
1.91	4	*	NS	*	- -				
2.40	5	NS	NS	*	NS	- -			
3.16	6	NS	*	*	*	*	- -		
2.64	7	NS	NS	*	*	NS	NS	- -	
4.11	8	NS	*	*	*	NS	NS	NS	- -

* denotes pairs of means that are significantly different at p <.05 level

The fourth item of the semantic differential required individuals to rate the posters along a continuum as to how reassuring, as opposed to threatening, they were.

There were significant differences between mean ratings of the posters at the $p < .05$ level. The results appear in Table 29. Post hoc comparisons revealed that Posters 3 and 8 were consistently rated more reassuring than the remaining posters. Poster 3 relied on a purely informative approach, whilst Poster 8 stressed personal responsibility. Poster 2, which depicted unclothed two males bodies, was rated more threatening than reassuring, in comparison to a number of the posters. The results appear in Table 30.

Table 29

MANOVA Summary Results for Responses to Semantic Differential

Adjective - Reassuring/Threatening

Source of Variation	Sum of Squares	df	Mean Square	F	S
Between	595.12	7	85.02	79.66	P < .000
Within	296.38	868	1.07		
Total	891.50	875			

Table 30

Significant Differences Between Mean Semantic Differential Ratings

Adjective - Reassuring/Threatening

Mean	Poster	1	2	3	4	5	6	7	8
3.41	1	- -							
4.40	2	*	- -						
1.82	3	*	*	- -					
3.60	4	NS	*	*	- -				
3.82	5	NS	*	*	NS	- -			
2.87	6	*	*	*	*	*	- -		
4.02	7	*	NS	*	NS	NS	*	- -	
2.75	8	*	*	*	*	*	NS	*	- -

* denotes pairs of means that are significantly different at $p < .05$ level.

The fifth item of the semantic differential required individuals to rate the posters along a continuum as to how effective the various posters were. There were significant differences between mean ratings of the posters at the $p < .05$ level. The results appear in Table 31. Post hoc comparisons revealed that two of the posters were consistently rated more effective than the rest. The third poster in particular, which relied on a highly informative approach was rated the most effective in comparison to the other posters, although the eighth poster, which stressed persoanl responsibility was also rated as more effective than many of the posters. A few other differences in mean responses were observed. The results appear in Table 32.

Table 31

MANOVA Summary Results for Responses to Semantic Differential

Adjective - Effective/Ineffective

Source of Variation	Sum of Squares	df	Mean Square	F	S
Between	419.48	7	59.93	35.00	P < .000
Within	1486.15	868	1.71		
Total	1905.63	875			

Table 32

Significant Differences Between Mean Semantic Differential Ratings

Adjective - Effective/Ineffective

Mean	Poster	1	2	3	4	5	6	7	8
3.69	1	-	-	-	-	-	-	-	-
3.84	2	NS	-	-	-	-	-	-	-
1.90	3	*	*	-	-	-	-	-	-
3.68	4	NS	NS	*	-	-	-	-	-
3.53	5	NS	NS	*	NS	-	-	-	-
3.22	6	NS	NS	*	NS	NS	-	-	-
3.87	7	NS	NS	*	NS	NS	*	-	-
2.64	8	*	*	*	*	*	NS	*	-

* denotes pairs of means that are significantly different at p <.05 level

The sixth item of the semantic differential required individuals to rate the posters along a continuum as to how offensive or inoffensive they were. There were significant differences between mean ratings of the posters at the p < .05 level. The

results appear in Table 33. Post hoc comparisons revealed that two of the posters were consistently rated more inoffensive than the rest. These posters were again the third and the eighth, which respectively were highly informative and stressed personal responsibility. Poster 2, which depicted two partly naked males was rated as being significantly more offensive than the remaining posters. The results appear in Table 34.

Table 33

MANOVA Summary Results for responses to Semantic Differential

Adjective - Offensive/Inoffensive

Source of Variation	Sum of Squares	df	Mean Square	F	S
Between	1139.41	7	162.77	111.47	P < .000
Within	1267.47	868	1.46		
Total	2406.88	875			

Table 34

Significant Differences Mean Semantic Differential Ratings*

Adjective - Offensive/Inoffensive

Mean	Poster	1	2	3	4	5	6	7	8
4.08	1	-							
2.40	2	*	-						
5.42	3	*	*	-					
3.09	4	*	*	*	-				
3.17	5	*	*	*	NS	-			
4.57	6	NS	*	*	*	*	-		
3.18	7	*	*	*	NS	NS	*	-	
5.43	8	*	*	NS	*	*	*	*	-

* denotes pairs of means that are significantly different at p <.05 level

The seventh item of the semantic differential required individuals to rate the posters as to how good or bad they were. There were significant differences between mean ratings of the posters at the $p < .05$ level. The results appear in Table 35. Post hoc comparisons revealed that Poster 3 and Poster 8 were considered significantly better than a number of the other posters, but there was not a significant difference in ratings between these two posters. Poster 3 was highly informative, whilst Poster 8 stressed personal responsibility. Poster 2, which depicted two partly clothed men, however, was considered worse than a number of the other posters. The results appear in Table 36.

Table 35

MANOVA Summary Results for responses to Semantic Differential

Adjective - Good/Bad

Source of Variation	Sum of Squares	df	Mean Square	F	S
Between	728.61	7	104.09	78.19	P < .000
Within	1146.14	861	1.33		
Total	1874.75	868			

Table 36

Significant Differences Between Mean Semantic Differential Ratings

Adjective - Good/Bad

Mean	Poster	1	2	3	4	5	6	7	8
3.40	1	- -							
4.30	2	*	- -						
1.69	3	*	*	- -					
3.74	4	NS	*	*	- -				
3.76	5	NS	NS	*	NS	- -			
2.88	6	NS	*	*	*	*	- -		
4.07	7	*	NS	*	NS	NS	*	- -	
2.23	8	*	*	NS	*	*	*	*	- -

* denotes pairs of means that are significantly different at p <.05 level

The eighth item of the semantic differential required individuals to rate the posters along a continuum as to how moral they were. There were significant differences in the mean ratings of the posters at the $p < .05$ level. The results appear in Table 37. Post hoc comparisons revealed that the third poster which was highly informative, and the eighth poster which stressed personal responsibility, were consistently rated as more moral than the rest of the posters. The difference in ratings between these two posters, however, was not significant. Poster 2, which depicted two naked males, was rated as being significantly more immoral than all the posters. A number of other significant differences in mean ratings were also found. The results appear in Table 38.

Table 37

MANOVA Summary Results for Responses to Semantic Differential Adjective - Moral/Immoral

Source of Variation	Sum of Squares	df	Mean Square	F	S
Between	905.83	7	129.40	128.23	P < .000
Within	868.92	861	1.01		
Total	1774.75	868			

Table 38

Significant Differences Between Mean Semantic Differential Responses Adjective - Moral/Immoral

Mean	Poster	1	2	3	4	5	6	7	8
3.29	1	- -							
4.51	2	*	- -						
1.75	3	*	*	- -					
3.86	4	*	*	*	- -				
3.77	5	NS	*	*	NS	- -			
2.65	6	*	*	*	*	*	- -		
3.93	7	*	*	*	NS	NS	*	- -	
1.82	8	*	*	NS	*	*	*	*	- -

* denotes pairs of means that are significantly different at p <.05 level

The final item of the semantic differential required individuals to rate the posters along a continuum as to how decent they were. There were significant differences in the mean ratings of the posters at the $p < .05$ level. The results appear in Table 39. Post hoc comparisons were then performed. The third poster utiliziing the informative approach and the eighth poster which stressed personal responsibility were rated consistently more decent than the remaining posters. No significant differences were noted between these two. Poster 2 which showed two naked male bodies was rated as being more indecent in comparison to the remaining posters. Other differences and the overall results appear in Table 40.

Table 39

MANOVA Summary Results for responses to Semantic Differential

Adjective - Decent/Indecent

Source of Variation	Sum of Squares	df	Mean Square	F	S
Between	970.88	7	138.70	131.16	P < .000
Within	917.17	868	1.06		
Total	1888.75	875			

Table 40

Significant Differences Between Mean Semantic Differential Ratings

Adjective - Decent/Indecent

Mean	Poster	1	2	3	4	5	6	7	8
3.08	1	- -							
4.45	2	*	- -						
1.63	3	*	*	- -					
3.90	4	*	*	*	- -				
3.86	5	*	*	*	NS	- -			
2.62	6	NS	*	*	*	*	- -		
3.78	7	*	*	*	NS	NS	*	- -	
1.72	8	*	*	NS	*	*	*	*	- -

* denotes pairs of means that are significantly different at p <.05 level

Multiple Regression Analysis

Stepwise multiple regression was used to establish measures which best predicted overall AIDS Knowledge Scale and AIDS Attitude Scale scores.

The best predictors of AIDS Knowledge Scale scores were, in order, the F Scale, which entered the equation first and resolved 11% of the variance, and then the Sex Knowledge Questionnaire which resolved a further 3% of the variance. No other measure contributed significantly at the $p < .05$ level. The results appear in Table 41. When the F Scale was excluded from consideration, the best predictor of AIDS Knowledge Scale scores proved to be the Sex Knowledge Questionnaire which resolved almost 10% of the variance. No other measure contributed significantly at the $p < .05$ level. The results appear in Table 42.

Table 41

Stepwise Regression Equation for Predictors of AIDS Knowledge Scale Scores (F Scale Included).

Scale	Multiple R	R Square	F	Sig
F Scale	.326	.106	14.66	.002
Sex Knowledge Scale	.375	.141	9.98	.001

No other measures contributed significantly to the equation $p < .05$.

Table 42

Stepwise Regression Equation for Predictors of AIDS Knowledge Scale Scores (F Scale Excluded)

Scale	Multiple R	R Square	F	Sig
Sexual Knowledge Scale	.307	.095	12.86	.001

No other measures contributed significantly to the equation $p < .05$.

The best overall predictor of attitudes towards AIDS was the F Scale,which accounted for 27% of the variance with the Sexual Opinion Survey entering the equation next and resolving a further 8% of the variance. This was followed by the Social Desirability scale which contributed to almost 4% of variance and then sex knowledge, which added a further 2 1/2% of the variance. No other measures contributed significantly to the equation. The results appear in Table 43. When the F Scale was excluded from consideration, the Sexual Knowledge Questionnaire proved to be the best predictor of AIDS Attitudes, the Sexual Opinion Survey entered the

equation next, whilst social desirability proved the only remaining significant contributor. These measures resolved 16, 8, and just over 3 1/2% of the variance in AIDS Attitude Scale scores, respectively The results appear in Table 44.

Table 43

Stepwise Regression Equation for Predictors of AIDS Attitude Scale Scores (F Scale Included).

Scale	Multiple R	R Square	F	Sig
F Scale	.523	.273	46.21	.000
Sexual Opinion Survey	.597	.356	33.70	.000
Social Desirability	.623	.394	26.23	.000
Sex Knowledge Scale	.705	.426	21.59	.000

No other measures contributed significantly to the equation $p < .05$.

Table 44

Stepwise Regression Equation for Predictors of AIDS Attitude Scale Scores (F Scale Excluded)

Scale	Multiple R	R Square	F	Sig
Sex Knowledge Scale	.399	.159	23.31	.000
Sexual Opinion Survey	.491	.241	19.35	.000
AIDS Attitude Scale	.528	.278	15.56	.000

No other measures contributed significantly to the equation $p < .05$.

In addition, stepwise multiple regression was used to predict individuals who felt themselves at risk for contracting AIDS and, who had, and had not, modified their

behaviors, respectively. Factors of the Sexual Opinion Survey entered the equation, as the only predictors. Modest, but significant, amounts of variance were resolved, providing further support for the utility of this instrument. Factor 2 of the Sexual Opinion Survey resolved a modest 3 1/2% of variance when the criterion variable was those at risk of getting AIDS, but had not changed their behaviors. The results appears in Table 45. Factor 1 of the same scale resolved 8% of variance, when the criterion variable used was those who had been at risk, but had changed their behavior. The results appear in Table 46. Note that given the very small sample size these results need to be interpreted with caution.

Table 45

Stepwise Regression Equation for Predictors of Individuals at risk of Contracting AIDS Without Subsequent Reported Behavior Change.

Scale	Multiple R	R Square	F	Sig
Sexual Opinion Survey Factor 2	.189	.035	4.49	.036

No other measures contributed significantly to the equation $p < .05$.

Table 46

Stepwise Regression Equation for Predictors of Individuals at risk of Contracting AIDS With Subsequent Reported Behavior Change.

Scale	Multiple R	R Square	F	Sig
Sexual Opinion Survey Factor 1	.282	.079	10.62	.001

No other measures contributed significantly to the equation $p < .05$.

CHAPTER 5.

DISCUSSION

This study attempted to establish the relationship between a number of personality variables, attitudes towards AIDS, knowledge about sex and AIDS. Given the seriousness of the topic, the reliability and validity of the findings is of utmost importance. It must be strongly emphasized that the findings of this study need to be examined within the context of two limiting factors. These factors are the existence of the low internal consistencies of some of the predictor and criterion variables, and the limited generalizability or external validity of the results that arise as a consequence of the nature of sample studied.

Examination of all the open-ended responses to the survey suggest that the study was taken seriously and that there was a lack of offence caused by the questions. This combined with the apparent independence of the results from social desirability response biases suggest that this type of research is acceptable, even welcomed by individuals and treated as a very important issue. More importantly, the manner in which respondents applied themselves to the study demonstrated maturity and responsibility. This adds credence to the internal validity of the study. Respondents were overwhelmingly unanimous in their belief that AIDS was a serious problem and that there was a very real need for education in order to combat the disease. Evidence suggests research dealing with salient topics yield more reliable responses (Nowakowska, 1973; Sudman & Bradburn, 1974).

On a less positive note, disappointingly modest alpha-coefficient or internal consistency reliabilities were obtained in the AIDS Knowledge Scale, despite its relative length. The modest reliabilities might have been due more to the sample than the scale, and it appears, from inspection of the frequency distributions, that the

AIDS Knowledge Scale may have contained too many easy items. The restriction in range of scores and homogeneity of scores, and thus limited varaince would attenuate internal consistency coefficients. However, modest reliability is permissible in tests of knowledge, which are judged more by rational appraisal of item content than by statistical analysis (Nunnally, 1978). From the pilot study of this test it appeared that some items did not discriminate effectively between high and low scorers because they were so easy, but these items did appear to be useful in terms of content and face validity, and were thus not discarded. Moreover, analysis of responses to each item provides insight into possible misconceptions about AIDS that may be relevant to health education. This would, however, attenuate correlations derived from this scale. Whilst efforts should be aimed at developing a reliable scale, a future recommendation for assessment of reliability of an instrument of this nature is that test-retest, or stability over time, might be a more meaningful statistic to calculate. It is conceivable that a test may be reliable when used with one sample and highly unreliable with another. This would be due to the differences in relative ease of the items depending on the knowledge levels of the sample used. Research across different samples would provide further information about this. The reliability of the Sexual Knowledge Questionnaire also proved to be somewhat disappointing, but this could be attributable, in part, to a larger proportion of questions dealing with fertility and female conception, that might not act as effective discriminators within the males of the sample.

Mischel (1969) argued that predictive validity correlations in personality seldom exceed .3 and that even correlations of that magnitude have come to be considered good in personality research. Mischel (1968, 1969) noted that personality correlations of .3 leaves 91% of the relevant variance unexplained. Epstein (1979, 1980) charged that Mischel's (1968, 1969) case is specious

because the reliability of the measures in question is not considered. Epstein (1979,1980) notes that personological studies often employ short, ill constructed measures frequently consisting of one item. Cook and Campbell (1979) dub the reliance on one or a few criterion measures as "mono-operations bias". Because reliability increases as test length increases (Lord & Novick, 1968; Nunnally, 1978), short tests are likely to be highly unreliable. Reliability sets upper limits on validity correlations (Lord & Novick, 1968; Nunnally, 1978). Thus predictive validity correlations based on unreliable predictors or criterion measures are unlikely to succeed .3. Epstein (1977, 1979, 1980) and Paunoen (1984) present evidence that, when reliability is increased, predictive validity correlations of .5 to .7 may be obtained.

Individual scores on the AIDS Knowledge Scale were generally high. Thus, at a superficial level, a positive aspect of the study was the apparently high levels of information about certain facets of AIDS. This included knowledge about transmission, condom use, and the manner in which the disease attacks the immune system. However, optimism generated by these results is, to an extent, tempered by the fact that a number of myths and misconceptions still existed in the minds of a relatively large group of individuals. These misconceptions centered around transmission of AIDS through kissing, social contact and mosquitoes, and misinformation concerning some safe sex practices. This observation is made all the more sobering in the light of the educational levels of the group under study, and the fact that a number of them will soon be in positions where they are to be providers of information themselves to a very impressionable group of people - children and adolescents. It is essential that future educational strategies stress the aspects highlighted in this section, because people may possibly not be motivated to distinguish between certain activities with low risk, such as mutual masturbation or

even oral sex, and avoidable sexual contacts whose risk is high, such as contact with prostitutes. Reassuring people about ways in which the virus is apparently not transmitted may, thus, be as important as informing them about likely avenues of transmission - particularly in the area of safe sex practices and contact through social transmission. To an extent, some people may be underestimating the extent of the disease and, to a lesser degree, may not be totally aware that AIDS is not just only a homosexual disease. Finally, people tended to greatly overestimate the risk of getting infected with HIV from blood transfusions in Canada. Masters, Johnson and Kolodny (1988a) very conservatively estimate that there is less than a one in five thousand chance of this happening in the United States. In Canada, Spurgeon (1988) estimates that the chances are considerably lower. These risks do escalate the more transfusions an individual has and thus, logically, hemophiliacs are at greater risk of contracting AIDS than the general population merely because of the numbers of transfusions they receive. Almost a third of respondents sampled did not consider this aspect.

The issue of levels of knowledge, specifically in terms of areas of precautions, however, warrants much closer attention. Greater ignorance was displayed by respondents on the open-ended questions. This suggests that the form of the questions could influence answers. This is understandable: scores on the open-ended questions may have been depressed by incomplete or perfunctory answers and scores on true-false items may have been inflated by guesses. Despite this, research on AIDS knowledge should employ open-ended and true-false questions and perhaps stress the questioning of similar aspects of AIDS from different perspectives as a number of interesting points did arise from the open-ended responses used in this study.

Some of responses to the open-ended items asking respondents to list precautions that can be taken to prevent the spread of the disease were scored correct,

but indicate perhaps that people do not have a full grasp of the finer aspects of their responses and concomitantly suggest that they possess less of an understanding of the disease than they may think they do. Examples of this include statements that partners should be tested before sexual intercourse. To be absolutely effective, testing would have to be performed twice, with a six month interval between testings. However, during that period the individual tested would have to remain celibate. In addition, all other possible vectors of transmission would also have to be ruled out. One can only question the practicality of this particular measure. Whilst almost 90% of the sample were able to suggest the condom would prevent transmission, this is a disturbing figure in many ways because it was the most common response received. To reiterate, use of the condom reduces risk, it does not eliminate it. Abstinence, which is the only really foolproof means of ensuring that HIV is not passed on through sexual means, was cited by only about half the sample as a solution. Creation of the impression of the efficacy and infallibility of the condom may be one of the dangers of present educational strategies that stress the use of a condom.

Monogamy was cited by two thirds of individuals as a means of ensuring that AIDS is not transmitted sexually. Masters, Johnson and Kolodny (1988b) note that, of a sample of married men between the ages of 20 to 40, 44% of males had had at least one extramarital sexual partner in the preceding five years. The figure for a similar sample of females was approximately 31%. Studies by Kinsey, Pomeroy, and Martin, (1948), Kinsey, Pomeroy and Martin (1953), and Blumstein and Schwartz, (1983) yield somewhat similar data. Figures for non-married individuals within reported monogamous relationships suggest higher incidences of infidelity (Masters, Johnson & Kolodny). In addition, monogamous sex alone will not prevent HIV infection if either of the partners is infected.

A further precaution cited by many of the respondents was getting to know your partners personal and sexual history, before sexual contact and then acting accordingly. There has to be a large degree of trust in utilizing such an approach, particularly because research does suggest that people have, in the past, tended to engage in some form of deception in relating sexual biographies (King et al., 1988) and that men are particularly likely to hide information about past homosexual experiences and sex with prostitutes (Masters, Johnson and Kolodny, 1988b). What makes this information all the more disturbing is that almost two thirds of the sample conceded that the use of alcohol would reduce the likelihood of taking even these somewhat ill conceived precautions.

The conclusions to be drawn from this is that information is being absorbed to some degree, but that this does not tell the whole story about levels of knowledge. This, to an extent, may reflect, in part, the complacency with which society perhaps adopts in dealing with AIDS and heterosexual activities, and also, in part, may reflect denial. Furthermore, such factors may also go some of the way in explaining why behavior change campaigns have not been markedly effective. What may be needed is an intensive small group oriented interactive program that constantly challenges and questions responses and notions individuals have in order to force them to go beyond the mere "safe sex platitudes" that are often advocated through media campaigns. Schools would be ideal environments for this, particularly because adolescents are fast being considered the next highest risk group (King et al., 1988). Knowledge, awareness and attitudes alone do not appear to be adequate to bring about behavior change and future research should ideally integrate the study of attitudes, knowledge levels and awareness with actual sexual behaviors and drug use, and, ultimately with actual HIV epidemological or sero-positivity studies. A further point that emerges

from this study is that the topic is a very complex one that, unfortunately, lends itself to half-truths and misconceptions which could conceivably be fatal.

Attitudes toward AIDS and AIDS victims among the sample appear to be somewhat compassionate and sympathetic, with almost unanimous acknowledgment that the disease is very serious and that people should be educated about the disease. Many felt that educational campaigns had been successful and that there was a need to financially support research and education on AIDS, and to care for AIDS patients. This is encouraging for prevention strategies. The responses to the survey, however, suggest that a core of about 10% of the sample appear to hold negative, moralistic and even punitive attitudes towards those with the disease and towards those who may be at risk for contracting the disease. Similar percentages felt that the disease was God's punishment for sexual wrong and that quarantining AIDS victims was an acceptable solution to the problem. This may highlight areas where attention is still needed and possibly even indicate that some people may feel that they are morally superior and not capable of getting AIDS. They may neglect to take precautions themselves. This may be a reflection of underlying prejudice or low levels of knowledge about the disease that exist within certain groups. It does also underscore the importance of stressing compassion and acceptance for the disease and those who may suffer from it. The church and the state could play a role in accomplishing this. Moreover, this reiterates the need to stress the dangers of risk behaviors, rather than risk groups.

Attitudes toward condom use also appeared relatively favorable, which is a useful sign for those who advocate safe sex practices as a pragmatic means of risk reduction. Ninety-nine percent of the sample disagreed with the statement that the use of condoms was not right and only 5% indicated they would never use the condom. More than three quarters of the sample indicated that they did not think that encouragement of the use of condom would encourage promiscuity. Thus, individual

attitudes generally appear conducive and receptive to condom use. However, promotion of condom as a means of risk reduction should stress the limitations of such a method and promulgate the merits of responsible sexual behavior. It is also unfortunate that attitudes do not necessarily reflect actual behaviors. The relationship between attitudes and behaviors needs to be addressed through research. This scale was also related to the rationally derived scale on the Sexual Opinion Survey reflecting comfort with homosexuality, supporting the suggestion that a component of this scale may reflect underlying prejudices.

The theoretical dimensions of attitudes to AIDS posited in this study were, in the main, confirmed by factor analysis. A closer analysis of these factors suggests that the samples' attitudes relating to AIDS and those individuals with the disease generally appear to be sympathetic, although males were less likely to disagree as strongly as females with a number of the statements. This suggests that females were somewhat more sympathetic than males, particularly when it came to the belief that certain individuals or groups deserved to get AIDS and that these same risk groups be punished for spreading the disease. Reasons for this do not emerge from the study, but given the perceived nature of the disease, males may feel more at risk and personally threatened than females and, thus, may not be as forgiving or tolerant as females.

Almost 7 1/2% of the sample felt that their behavior in the past had put them at risk of contracting AIDS; yet they still maintained that they had not changed their behaviors in any way. Of these, 30% were males and 70% females. Twenty percent of the sample felt they had modified behaviors that might have increased the risk of them contracting the disease. Of this group, an even number were male and female, although females comprised a larger proportion of the sample overall. Almost three quarters of the respondents did hot consider themselves at risk of contracting AIDS,

but of this cohort approximately half felt their behaviors had been influenced by AIDS.

These figures may need to be interpreted cautiously as the number of individuals who regard themselves at risk appears suspiciously low. Canada youth and AIDS notes that a study by Fisher and Miscovich (1987) concluded a sizeable proportion of a sample of 122 undergraduate men and women put themselves at risk of contracting AIDS, either by having numerous sexual partners or by failing to engage in active preventive methods. This underscores the need for research to incorporate questions dealing with in-depth sexual behaviors and practices. In addition, possible drug and substance abuse should be investigated as this is related to sexual activities, especially amongst adolescents (Sorenson, 1972, Leigh, 1990, Masters, Johnson & Kolodny, 1988a). The maintenance of these behaviors over time should also be examined.

Surprisingly, more females than males reported that they were at risk, but had not modified their behaviors. Unfortunately given the very small sample of both genders who fall in this category few conclusive statements can be made, but this clearly warrants further investigation. It may be that, although they believe themselves to be at risk, the disease may still, to them, be a male homosexual one and, thus, females do not feel motivated or threatened enough to change their behaviors. This is an issue for speculation and future research. In addition, the number of females who reported being at risk may be a reflection of a tendency to be more honest,whilst males may be underreporting as a result of denial. Moreover, the conception of exactly who is at, or what constitutes, risk may not be uniformly understood by the respondents

Whilst the AIDS attitude scale clearly does need refinement, it generally yielded meaningful factors and shows promise as a tool that may provide useful information

for surveying attitudes that assist in targeting educational strategies. Whilst it could be shortened, with a number of the items being possibly redundant, it appears to be a multi-dimensional scale with an acceptably high level of internal consistency. There also appeared to be modest relationships between levels of knowledge about AIDS and attitudes, which is a finding that is consistent with previous research. Given the very low reliability of the AIDS Knowledge Scale this modest correlation is not unexpected and, it is possible, that, were more reliable measures of AIDS knowledge developed, correlations would increase. It is also interesting to note that a number of the factors cited by the Australia's National Advisory Committee on AIDS (Spurgeon, 1988) and discussed in the literature review as barriers to behavior change are relevant to this sample.

The construct validity and psychometric properties of the Sexual Opinion Survey were also supported, to a large degree, by the findings of this study and as such, this scale may have use in ascertaining individual attitudes and feelings in designing educational interventions. However erotophobia-erotophilia appeared to be unrelated to levels of knowledge about sex and AIDS, as was hypothesized in this study. This could be an artifact of the low reliabilities of the latter scales, but a recent study with a sample of adolescents raised similar doubts as to the usefulness of this scale in the area of knowledge prediction, per se (Gerrard & Reis, 1989).

The erotophilia scale did, however, correlate highly with the measure of attitudes towards AIDS. Correlations were not obtained between erotophobia-erotophilia and either the complexity scale, the social desirability scale and the F Scale. This is useful as it may be an indicator of discriminative validity which is invaluable in a research instrument and may be what the F Scale lacks. It also suggests that the sexual dimensions of the scale are not related to prejudice, as measured by the F Scale, and that knowledge gained from literature and research on

sexually transmitted diseases and unwanted pregnancies may be of value in facilitating understanding of many of the facets of the AIDS epidemic .

Further research would be useful in assessing the validity of this scale with adolescent populations, and enable use of the scale in school settings. Subscales and factors may also prove useful in the area of education in identifying affective responses to certain sexual issues, but the efficacy of the scale as a predictor of knowledge was not, in the main, borne out. Some useful gender differences were also highlighted by this scale.

The F Scale continues to be a complete enigma. Whilst still having a relatively high internal consistency coefficient, it proved impossible to interpret in terms of factorial structure. Inter-item correlations were also low. As previous findings would indicate, the scale did correlate significantly with a number of the other measures used in this scale, but as Altemeyer (1981) stresses "research with conceptually or psychometrically weak tools is largely a waste of time" (p. 25). Merely because the scale "works" is not an acceptable justification for its continued use, particularly as this scale with its obscure items, tends to defy rationally and empirically derived interpretation. In addition many of the conceptualizations of authoritarianism generated in the literature review, were not supported.

However given these reservations at a simplistic level, if one concedes that the F Scale does measure prejudice, then clearly prejudicial attitudes as reflected by the F Scale are related to negative and punitive attitudes towards AIDS, and those who may be at risk for the disease. Low levels of prejudice, conversely, are related to more tolerant attitudes towards those with AIDS, or who those who may be at risk of contracting the disease. It can thus be concluded from the results of this study, that prejudice does form a component of negative, punitive, and illiberal attitudes that are related to a number of issues concerning AIDS. In addition authoritarianism was

related to attitudes towards homsexuality which is a consistent finding in the literature.

The relationship between authoritarianism and illiberal attitudes towards AIDS, however, may also have been exaggerated by a directional response set because only a few of the items in the AIDS Attitude Scale were not worded in the same direction as the F Scale. In terms of research, future efforts should be directed towards devising an AIDS attitude scale that contains an equal number of positively and negatively worded items.

The F Scale also seemed to be unrelated to social desirability, although modest correlations were noted between the F Scale and the ITI. This is also consistent with previous research.

Educational campaigns would, on the basis of this study, benefit from stressing the high risk status of sexual partners of risk groups in AIDS transmission and not merely the existence of risk groups, which tends to polarize attitudes. If certain myths regarding modes of transmission can be dispelled, this may reduce intolerance. That AIDS is a sexual transmitted disease, and not a homosexual disease, should also be stressed. This, in turn, may reduce possible negative feelings towards many of those who may have the disease, particularly as a significant correlation was note between the F Scale and levels of knowledge about AIDS and sex.

Cognitive Complexity, as measured by the ITI in this study, appeared to be only modestly related to a number of measures used. An exception is the high correlation between the ITI and the F Scale, which has been noted already. The relationship between the complexity and levels of knowledge of about AIDS and sex approached significance. This suggests that, given accurate and reliable measures of these constructs, more tangible relationships may emerge. On the basis of available results, however, it appears that, as a predictor of information processing levels or

styles in relation to AIDS, the hypotheses or expectations relating to this construct were not supported. Cognitive complexity was modestly correlated with the AIDS Attitude Scale, but this may suggest that the complexity scale does not, as posited in the literature review, necessarily get at underlying cognitive structures, but may merely reflect belief content. Much of the difficulty, however, may lie with developing a useful measure of cognitive complexity and this study does not satisfactorily resolve this issue. Complexity, as measured by the ITJ, was unrelated to the construct of erotophobia-erotophilia. The relationship discovered between the ITI and a measure of social desirability has been obtained in previous studies (Bieri, 1965).

Several empirical questions were examined using multiple regression. The best predictors of AIDS knowledge scores were, in order, the F Scale, and then the Sex Knowledge Questionnaire. When the F Scale was excluded from consideration, a justifiable step given the reservations expressed about its psychometric validity, the best predictor of AIDS Knowledge proved to be the Sex Knowledge Questionnaire, with no other measure contributing significantly. This does provide support for making AIDS education an integral part of sex and health education, particularly within the schools.

The best overall predictor of attitudes towards AIDS was the F Scale, with the Sexual Opinion Survey entering the regression equation next. This was followed in the equation by the social desirability scale and the Sex Knowledge Questionnaire. When the F Scale was excluded from consideration, the Sexual Knowledge Questionnaire proved to be the best predictor of AIDS Attitudes; the Sexual Opinion Survey entered the equation next, whilst social desirability proved the only remaining significant contributor.

Stepwise multiple regression was used to predict individuals on the basis of who felt themselves at risk for contracting AIDS and who had, and had not, modified their behaviors respectively. Factors of the Sexual Opinion Survey entered the equation as the only predictors. Modest, but significant, amounts of variance were resolved, providing further support for the utility of this instrument.

Gender differences were also discovered on a number of items on the scale. Males were more likely to want to take part in multiple sexual partner relationships, group sex and unusual sexual practices. This suggests that male-female attitudes in certain areas have not converged. Male and female attitudes to homosexuality did not appear to be significantly different, but females were less likely to be interested in pornography and more likely to be offended by open sexual displays.

A further objective of this study was to determine whether individual responses to posters were influenced by any of the personality, attitude or knowledge variables used in this study. Results suggest that there were no interpretably significant differences in reactions on the semantic differential scales to educational posters along these lines. Differences in gender did not appear to influence how respondents reacted to posters. There were however, significant differences noted between semantic differential ratings for different posters, suggesting that the overall content, message and design of educational posters has an important bearing on the reaction to the poster. The sample generally reacted most positively to two posters: the first was highly informative highlighting possible myths about AIDS; the second stressed personal responsible for prevention of the disease. These two posters were consistently rated as more effective, decent, moral, informative, persuasive and reassuring than the remaining posters. Conversely a poster which depicted two naked male chests touching and advocating use of the condom was perceived as less effective and more immoral, shameless and threatening than the remaining posters. One cannot

determine whether these evaluative responses translate into behavior change per se, but the results suggest that the type of message that posters convey may warrant more careful consideration in educational strategies than concern for individual differences within target groups. Different target groups may also react differently to different posters. Further research is needed to determine the efficacy of different posters on specific samples before using them. These are also issues for speculation. Yarber (1988) and Stevenson and DeBord (1988) note that factual information is not as important as behavioral and affective education in eliciting behavior change, and this may be related to factors such as reactions to stimuli. It may be difficult to distinguish between factual and affective within education, because the former may be a component of the latter.

This study's primary purpose can be considered exploratory; the logical progression from this study would be to incorporate an analysis of self-reported sexual behavior and drug use in relation to some of the measures used in this study, including the Sexual Opinion Survey, the AIDS Knowledge Scale and the AIDS Attitude Scale. Baldwin, Whiteley and Baldwin (1989) noted that students reported their sexual behavior had been affected by AIDS, but these claimed effects were not related to measures of such behavior. Behavioral assessment is essential to provide further information. This could be incorporated into the tri-componential model of attitudes introduced in the literature review of this study, which may generate further information of use in devising effective educational strategies.

Moreover this study provides very strong evidence to suggest research into personal issues dealing with AIDS is acceptable, responsible and even welcomed, given the seriousness with which respondents apparently received the survey, and indeed due to the seriousness of the disease itself. The caveat regarding generalizability of findings across different samples does, of course, apply

In conclusion, whilst relatively low reliabilities were obtained in some of the scales of this study, and whilst the generalizability of these results across different samples and time periods is uncertain, this study does provide evidence for the existence of predictive and meaningful relationships between a number of personality constructs, knowledge and attitudes towards AIDS. In many ways, the research conducted has raised more issues than it solved, but this is the nature, function, and role of research. AIDS is, more than anything, a dynamic phenomenon that does not lend itself to absolute knowledge and truths. It is an occurrence that is of great importance to humanity, and touches on a number of moral and ethical issues central to scientific endeavor. AIDS evolves as it progresses, so too must research into the disease - be it medical or psychosocial. The constant theme behind this thesis has been the importance and need for compassion, understanding and sympathy in many areas related to the disease. Most significantly perhaps, this study shows that much of the sample surveyed share a similar respect and concern for mankind and for AIDS itself. This is an important factor if responses to the disease are to be successful.

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APPENDIX A

1 2 3 4

Thank you for participating in this research study. Its intention is to find out more about attitudes and personality factors that may be related to many issues central to AIDS.
All questionnaires are completely anonymous. The information is to be used pureLy for research purposes. Please answer each question honestly and carefully. Do not skip any questions. The numbers on the left column of each page are for computer scoring. Ignore them.
The survey consists of two parts: Part I, which is to be completed in your own time and Part II, which will be completed immediately after completion of Part I.

Thank you again for your cooperation.

PART I

Please provide the following information :

5 sex: male female [circle]

6-7 age:.....

8 married single [circle]

1. Please mark the following statements either true or false. There are no right or wrong answers.

	True	False	
09	___	___	1] I'm always willing to admit it when I make a mistake
10	___	___	2] I like to gossip at times
11	___	___	3] I always like to practice what I preach
12	___	___	4] There have been occasions when I took advantage of someone
13	___	___	5] I have never resented being asked to return a favour
14	___	___	6] I sometimes try to get even rather than forgive and forget
15	___	___	7] I have never been irked when people expressed ideas very different from my own
16	___	___	8] At times I have really insisted on having things my own way

2. **Record your opinion of each statement on the following basis.**

Circle 1 if you strongly agree
Circle 2 if you moderately agree
Circle 3 if you only slightly agree
Circle 4 if you only slightly disagree
Circle 5 if you moderately disagree
Circle 6 if you strongly disagree

There are no right or wrong answers. Please respond to all statements.

17	**agree 1 2 3 4 5 6 disagree**	1] Sex crimes such as rape and attacks on children deserve more than mere imprisonment; such criminals ought to be publicly whipped or worse
18	**agree 1 2 3 4 5 6 disagree**	2] What the youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country
19	**agree 1 2 3 4 5 6 disagree**	3] There is hardly anything lower than a person who does not feel a great love gratitude, and respect for his parents for his parents
20	**agree 1 2 3 4 5 6 disagree**	4] Every person should have complete faith in some supernatural power whose decisions one obeys without question
21	**agree 1 2 3 4 5 6 disagree**	5] Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down
22	**agree 1 2 3 4 5 6 disagree**	6] Obedience and respect for authority are the most important virtues children should learn
23	**agree 1 2 3 4 5 6 disagree**	7] Homosexuals are hardly better than criminals and ought to be severely punished
24	**agree 1 2 3 4 5 6 disagree**	8] Nowadays when so many different kinds of people move around and mix together so much, a person has to protect himself especially carefully against catching an infection or disease from them
25	**agree 1 2 3 4 5 6 disagree**	9] People can be divided into two distinct classes: the weak and the strong
26	**agree 1 2 3 4 5 6 disagree**	10] No sane, normal, decent, person could ever think of hurting a close friend or relative
27	**agree 1 2 3 4 5 6 disagree**	11] Some day it will probably be shown that astrology can explain a lot of things
28	**agree 1 2 3 4 5 6 disagree**	12] Nowadays more and more people are prying into matters that should remain personal and private
29	**agree 1 2 3 4 5 6 disagree**	13] If people would talk less and work more everbody would be better off
30	**agree 1 2 3 4 5 6 disagree**	14] An insult to our honour should always be punished
31	**agree 1 2 3 4 5 6 disagree**	15] Most of our problems would be solved if we could somehow get rid of the immoral, crooked and feeble minded
32	**agree 1 2 3 4 5 6 disagree**	16] When a person has a problem or worry, it is best for him/her not to think about it, but to keep busy with more cheerful things
33	**agree 1 2 3 4 5 6 disagree**	17] Science has its place, but there are many important things that can never be understood by the human mind
34	**agree 1 2 3 4 5 6 disagree**	18] The wild sex life of the old Greeks and Romans was tame compared to some of the goings on in this country,even in places where people least expect it
35	**agree 1 2 3 4 5 6 disagree**	19] Human nature being what it is, there will always be war and conflict
36	**agree 1 2 3 4 5 6 disagree**	20] The true Canadian way of life is disappearing so fast that force may be necessary to preserve it

37	agree 1 2 3 4 5 6 disagree	21] What this country needs most, more than laws and political programs, is a few courageous, tireless,devoted leaders in whom the people can put their faith
38	agree 1 2 3 4 5 6 disagree	22] No weakness or difficulty can hold us back if we have enough will power
39	agree 1 2 3 4 5 6 disagree	23] Familiarity breeds contempt
40	agree 1 2 3 4 5 6 disagree	24] Some people are born with an urge to jump from high places
41	agree 1 2 3 4 5 6 disagree	25] Most people don't realise how much our lives are controlled by plots hatched in secret places
42	agree 1 2 3 4 5 6 disagree	26] A person who has bad manners, habits and breeding can hardly expect to get along with decent people
43	agree 1 2 3 4 5 6 disagree	27] Nobody ever learned anything except through suffering
44	agree 1 2 3 4 5 6 disagree	28] War and social troubles may someday be ended by an earthquake or flood that would destroy the whole world
45	agree 1 2 3 4 5 6 disagree	29] The businessman and the manufacturer are much more important to society than the artist and the professor

3. Please respond to each item according to the scale given below as honestly as you can. There are no right or wrong answers and your answers are completely anonymous.

Circle 1 if you strongly agree
Circle 2 if you moderately agree
Circle 3 if you only slightly agree
Circle 4 if your feelings are neutral
Circle 5 if you only slightly disagree
Circle 6 if you moderately disagree
Circle 7 if you strongly disagree

46	agree 1 2 3 4 5 6 7 disagree	1] I think it would be entertaining to look at hard-core pornography
47	agree 1 2 3 4 5 6 7 disagree	2] Pornography is obviously filthy and people should not try to describe it as anything else
48	agree 1 2 3 4 5 6 7 disagree	3] Swimming in the nude with a member of the opposite sex would be an exciting experience
49	agree 1 2 3 4 5 6 7 disagree	4] Masturbation can be an exciting experience
50	agree 1 2 3 4 5 6 7 disagree	5] If I found out that a close friend of mine was a homosexual it would annoy me
51	agree 1 2 3 4 5 6 7 disagree	6] If people thought I was interested in oral sex I would be embarrassed
52	agree 1 2 3 4 5 6 7 disagree	7] Engaging in group sex is an entertaining idea
53	agree 1 2 3 4 5 6 7 disagree	8] I personally find that thinking about engaging in sexual intercourse is arousing
54	agree 1 2 3 4 5 6 7 disagree	9] Seeing a pornographic movie would be sexually arousing to me
55	agree 1 2 3 4 5 6 7 disagree	10] Thoughts that I may have homosexual tendencies would not worry me
56	agree 1 2 3 4 5 6 7 disagree	11] The idea of my being physically attractive to members of the same sex is not depressing
57	agree 1 2 3 4 5 6 7 disagree	12] Almost all pornographic material is nauseating
58	agree 1 2 3 4 5 6 7 disagree	13] It would be emotionally upsetting to me to see someone expose themselves publicly
59	agree 1 2 3 4 5 6 7 disagree	14] Watching a go-go dancer of the opposite sex would not be very exciting
60	agree 1 2 3 4 5 6 7 disagree	15] I would not enjoy watching a pornographic movie
61	agree 1 2 3 4 5 6 7 disagree	16] When I think about seeing pictures showing someone of the same sex as myself masturbating it nauseates me

62 **agree 1 2 3 4 5 6 7 disagree** 17] The thought of engaging in unusual sex practices is highly arousing

63 **agree 1 2 3 4 5 6 7 disagree** 18] Manipulating my genitals would probably be an arousing experience

64 **agree 1 2 3 4 5 6 7 disagree** 19] I do not enjoy daydreaming about sexual matters

65 **agree 1 2 3 4 5 6 7 disagree** 20] I am not curious about explicit pornography

66 **agree 1 2 3 4 5 6 7 disagree** 21] The thought of having long term relations with more than one sex partner is not disgusting to me

4. The following is a test of knowledge of certain sexual matters. Please circle the number on the left hand column that is the most correct response to the questions asked.

D U P 2
1 2 3 4

05 1 2 3 4 1. The single most important factor in achieving pregnancy is :
1. Time of exposure in the cycle
2. Female's desire or wish to become pregnant
3. Frequency of intercourse
4. Female's overall state of health

06 1 2 3 4 2. Which of the follcwing is the most desirable (effective) method of contraception or birth control :
1. condom
2. diaphragm plus spermicidal jelly or cream
3. rhythm
4. pill

07 1 2 3 4 3. Following release from the ovary the human ovum (egg) is capable of being fertilised for :
1. 6 to 12 hours
2. 24 hours
3. 48 hours
4. 4 to 6 days

08 1 2 3 4 4. A good index of a female's relative fertility (ability to achieve pregnancy) is:
1. her overall health
2. the regularity of her periods
3. the level of intensity of her sex drive
4. her ability to achieve orgasm

09 1 2 3 4 5. Which of the following methods of contraception is most effective :
1. condom
2. rhythm
3. diaphragm plus spermicidal jelly or cream
4. intrauterine device

10 1 2 3 4 6. The normal female most often ovulates (gives off eggs) :
1. two weeks before the onset of menstruation
2. just prior to menstruation
3. immediately following menstruation
4. at unpredictable times throughout the cycle

11 1 2 3 4 7. Infertility (inability to achieve pregnancy) is :
1. familial or inherited
2. a male problem in one third of cases
3. a female problem in 90% of the cases
4. easily diagnosed after six months of marriage

12 1 2 3 4 8. Which of the following is the poorest or least dependable method of contraception :
1. condom
2. diaphragm
3. postintercourse douching
4. rhythm

13 1 2 3 4 9. A normal human ovum (egg) is approximately the same size as :
1. a pinhead
2. a small pearl
3. a dime
4. none of the above

14 1 2 3 4 10. Fertilisation (union of sperm and egg) normally occurs in which of the following anatomical locations :
1. the uterus (womb)
2. the cervix (mouth of womb)
3. the tube
4. the vagina

15 1 2 3 4 11. Menopause is a time of :
1. diminished sexual drive
2. absolute infertility
3. rapid aging
4. altered reproductive and menstrual functioning

16 1 2 3 4 1 2 The rhythm method of contraception is
1. always effective
2. avoidance of intercourse during unsafe (or fertile) time
3. a technique of intercourse
4. none of the above

	True	False	
17	____	____	13. Pregnancy would be impossible in early adolescence when menstruation has not yet even begun or is not at all regularly established.
18	____	____	14. Menstrual blood is similar to a body 'poison" or toxin that must be eliminated in order for a women to remain healthy.
19	____	____	15. A woman who begins to menstruate on the first Wednesday of every month is "as regular as a clock."
20	____	____	16. In order to have a normal period there must be a moderate to heavy flow in terms of amount of blood and or duration of flow.
21	____	____	17. The loss of one ovary through disease or surgery diminishes a women's fertilityt litle if at all
22	____	____	18. Anatomical differences (i.e. size, shape, capacity, etc.) of the genital organ has a great bearing on sexual compatibility or satisfaction.
23	____	____	19. Unplanned or undesired pregnancies have a greater likelihood of miscarrying than do planned pregnancies.
24	____	____	20. Failure to have an orgasm on the part of the female eliminates or substantially reduces the likelihood of becoming pregnant.
25	____	____	21. Withdrawal is an effective means of contraception (birth control).
26	____	____	22. Birth control pills directly increase the sex drive (desire in most women).
27	____	____	23. Sperm retain their ability to fertilize (cause pregnancy) for one to two days following ejaculation (release).
28	____	____	24. Most women are more fertile during one particular time of the year than another.

5. This is a measure of knowledge of AIDS.Please answer all questions.

	True	False	
29	____	____	1] The letters AIDS stand for Advanced Immune Deficiency Syndrome
30	____	____	2] Social contact has been shown to spread AIDS
31	____	____	3] Exchange of body fluids such as semen and blood are the primary means of passing AIDS on
32	____	____	4] Certain sexual practices carry a greater risk of passing on AIDS than others
33	____	____	5] Over five million people worldwide may be infected with the HIV virus
34	____	____	6] The HIV virus causes AIDS, but only about twenty percent of those who have the virus develop AIDS
35	____	____	7] People who have intercourse with more than one partner are more likely to get AIDS
36	____	____	8] A person can get AIDS from kissing an AIDS victim
37	____	____	9] Prostitutes stand the same chance of getting Aids as anybody else
38	____	____	10] Most AIDS cases in Africa are a result of heterosexual transmision
39	____	____	11] A person can get AIDS from intravenous injections with unsterilised needles
40	____	____	12] Using a condom during sexual intercourse reduces the risk of getting AIDS
41	____	____	13] Nearly all the recorded AIDS cases in the world result from homosexual transmission
42	____	____	14] Oral sex [touching another persons sexual parts with ones mouth] is not a common way of getting AIDS
43	____	____	15] Indulging in heterosexual anal intercourse does not increase the risk of contracting or passing on AIDS
44	____	____	16] AIDS makes a person ill because it destroys the bodies ability to fight disease
45	____	____	7] A person can get AIDS from feeding and caring for an AIDS victim
46	____	____	18] Babies can be born with AIDS
47	____	____	19] It is not possible to get AIDS from the seat of a toilet used by an AIDS victim or from using public washroom facilities
48	____	____	20] Mutual masturbation is not a common way of getting AIDS
49	____	____	21] Sexual partners of those in AIDS high risk groups do not run a great risk of getting AIDS themselves
50	____	____	22] Haemophiliacs should be considered amongst those at high risk of getting or passing on AIDS
51	____	____	23] It is not possible to get AIDS from a healthy looking person
52	____	____	24] Mosquitoes and other insects can transmit AIDS to human beings
53	____	____	25] Discovery of a cure for AIDS is imminent
54	____	____	26] It is unlikely that a person will get AIDS from a blood transfusion in Canada

List four precautions that one can take to prevent the spread of AIDS:

55 27] _____

56 28] _____

57 29] _____

58 30] _____

6. Thirteen pairs of responses are shown below. Please select one response from each pair that more accurately shows your opinion or feeling and record your choice. Be frank and indicate, in each case, your true feeling or opinion or the reaction you would rather make in the situation. Do not indicate how you should feel or act; rather how you do feel and act. M ake sure you are aware of the situation or topic that each pair fo responses refers to. Circle either A or B in the column on the left hand side to record your respomse.

Imagine someone has criticised you. Choose the response from each pair that comes closest to your feelings about such criticism.

1. When I am criticised .....

59 **A B**

A. I try to determine whether I was right or wrong. I examine my behaviour to see if it was abnormal. Criticism usually indicates I have acted badly and tends to make me aware of my own bad points.

B. It could posibly be that there is some misunderstanding about something I did or said. After we both explain our viewpoints, we can probably reach some sort of compromise.

2. When I am criticised .....

60 **A B**

A. It often has little or no effect on me. I don't mind constructive criticism too much, but I dislike destructive criticism. Destructive criticism should be ignored.

B. I try to accept and consider the criticism. Sometimes it has caused me to change myself; at other times I have felt that the criticism has didn't really make much sense.

Imagine that you are in doubt. Choose the response from this pair that comes closest to your feelings about such doubt.

3. When I am in doubt....

61 **A B**

A. I become uncomfortable. Doubt can cause confusion and make one do a poor job. When one is in doubt he should ask and be sure of himself.

B. I find myself wanting to remove the doubt, but this often takes time. I may ask for help or advice if I feel that my questions won't bother the other person.

Imagine that a friend has acted differently toward you. Choose the response from this pair that comes closest to your feelings about such an action.

4. When a friend has acted differently towards me ....

62 **A B**

A. I am not terribly surprised because people act in many different ways. We are different people and I can't expect to understand all their reasons for acting in different ways.

B. I am usually somewhat surprised but it does not bother me very much. I usually act the way I feel towards others. People worry too much about others' actions and reactions.

5. When a friend has acted differently towards me ....

63 **A B**

A. There has to be a definite reason. I try to find out this reason, and then act accordingly. If I'm right I'll let them know it. If they're wrong, they should apologise.

B. I usually let them go their way and I go mine. If a friend wants to act differently that's their business, but it's my business if I don't want to be around when they're that way.

6. When a friend has acted differently towards me ....

64 **A B**

A. I don't get excited. People change and this may cause differences. It is important to have friends, but you can't expect them to always be the same.

B. I like to get things back to normal as soon as possible. It isn't right for friends to have differences between them. Whoever is at fault should straighten themself out.

Think about the topic of people in general. Choose the response from this pair that comes closest to your thoughts about people.

7. This I believe about people ....

65 **A B**

A. I can tell if I am going to get along with a peron very soon after meeting him. Most people act either one way or another and usually it is not difficult to say what they are like.

B. It's hard for me to say what a person is like until I've known him a long time. People are not easy to understand and often act in unpredictable ways.

Think about the general topic of leaders. Choose the response from each pair that comes closest to your thoughts about leaders.

8. Leaders ....

66 **A B**

A. Leaders cannot provide all the answers. They are like other people- they have to figure out what action is necessary and learn from their mistakes.

B. Leaders make decisions sometimes without being sure of themselves. We should try to understand this and think of ways to help them out

9. Leaders ....

67 **A B**

A. There are times when a leader shouldn't make decisions for those under him or her. The leader has the power to decide things, but each person has certain rights also.

B. A leader should give those under him or her some opportunity to make decisions, when possible. At times, the leader is not the best judge of a situation and should be willing to accept what others have to say.

Imagine that someone has found fault with you. Choose the response from each pair that comes closest to your feelings about such a situation.

10. When other people find fault with me ....

68 **A B**

A. It means that someone dislikes something I'm doing. People who find fault with others are not always correct

B. It means that someone has noticed something and feels they must speak out. It may be that we don't agree about a certain thing. Although we both have our own ideas, we can talk about it.

11. When other people find fault with me ....

69 **A B**

A. They have noticed something about me of which I am not aware. Although criticism may be hard to take, it is often helpful.

B. They are telling me something they feel is correct. Often they may have a good point which can help me in my thinking. At least it's worthwhile to consider it.

12. When other people find fault with me ....

70 **A B**

A. I like to find out what it means; since people are different from one another, it could mean almost anything. A few people just like to find fault with others but there's usually something to be learned.

B. There is something to be changed. Either I am doing something wrong or else they don't like what I'm doing. Whoever is at fault should be informed so that the situation can be set straight.

13. When other people find fault with me ....

71 **A B**

A. I don't mind if their remarks are meant to be helpful, but there are too many people who find fault just to give you a hard time.

B. It often means that they're trying to be disagreeable. People get this way when they've had a bad day. I try to examine their remarks in terms of what's behind them.

7. This is a scale that measures certain attitudes relevant to AIDS.

Circle 1 if you strongly agree
Circle 2 if you moderately agree
Circle 3 if you only slightly agree
Circle 4 if you only slightly disagree
Circle 5 if you moderately disagree
Circle 6 if you strongly disagree

There are no right or wrong answers. Please respond to all statements.

D	U	P	3							
1	2	3	4							
05		**Agree**	1	2	3	4	5	6	**Disagree**	1] AIDS is a very serious problem
06		**Agree**	1	2	3	4	5	6	**Disagree**	2] It is very important to find a cure or a vaccine for AIDS
07		**Agree**	1	2	3	4	5	6	**Disagree**	3] It is imperative that people are educated about the threat of AIDS
08		**Agree**	1	2	3	4	5	6	**Disagree**	4] Education campaigns against AIDS have been successful
09		**Agree**	1	2	3	4	5	6	**Disagree**	5] Punitive measures will be more effective in combating AIDS than education strategies
10		**Agree**	1	2	3	4	5	6	**Disagree**	6] Sexually explicit information should be provided to all ages if it will educate them
11		**Agree**	1	2	3	4	5	6	**Disagree**	7] AIDS education campaigns have really changed my lifestyle and my sexual habits
12		**Agree**	1	2	3	4	5	6	**Disagree**	8] My sexual habits have never put me at risk of contracting AIDS
13		**Agree**	1	2	3	4	5	6	**Disagree**	9] There is a very great need to spend money on AIDS research
14		**Agree**	1	2	3	4	5	6	**Disagree**	10] There is a great need to spend money treating AIDS victims
15		**Agree**	1	2	3	4	5	6	**Disagree**	11] Remaining faithful to one sexual partner is the solution to the AIDS problem
16		**Agree**	1	2	3	4	5	6	**Disagree**	12] Homosexuality is wrong for religious reasons
17		**Agree**	1	2	3	4	5	6	**Disagree**	13] Homosexuality is wrong for moral reasons
18		**Agree**	1	2	3	4	5	6	**Disagree**	14] Homosexuals deserve to get AIDS
19		**Agree**	1	2	3	4	5	6	**Disagree**	15] Promiscuity is wrong for moral reasons
20		**Agree**	1	2	3	4	5	6	**Disagree**	16] Promiscuity is wrong for religious reasons
21		**Agree**	1	2	3	4	5	6	**Disagree**	17] The promiscuous deserve to get AIDS
22		**Agree**	1	2	3	4	5	6	**Disagree**	18] Prostitution is wrong for moral reasons
23		**Agree**	1	2	3	4	5	6	**Disagree**	19] Prostitution is wrong for religious reasons
24		**Agree**	1	2	3	4	5	6	**Disagree**	20] Prostitutes deserve to get AIDS
25		**Agree**	1	2	3	4	5	6	**Disagree**	21] Anyone with AIDS has only themself to blame

26	Agree 1 2 3 4 5 6 Disagree	22] AIDS is God's punishment for sexual wrong
27	Agree 1 2 3 4 5 6 Disagree	23] AIDS is largely limited to poorer less economically developed nations
28	Agree 1 2 3 4 5 6 Disagree	24] Only deviants get AIDS [e.g. drug addicts, prostitutes, homosexuals]
29	Agree 1 2 3 4 5 6 Disagree	25] AIDS shows sexual permissiveness is wrong
30	Agree 1 2 3 4 5 6 Disagree	26] AIDS would not have happened if traditional religious values had been followed by man
31	Agree 1 2 3 4 5 6 Disagree	27] Other people might catch AIDS, but not me
32	Agree 1 2 3 4 5 6 Disagree	28] Employers should be allowed to dismiss AIDS victims
33	Agree 1 2 3 4 5 6 Disagree	29] Governments should be entitled to perform compulsory AIDS tests
34	Agree 1 2 3 4 5 6 Disagree	30] No-one has the right to refuse an AIDS test
35	Agree 1 2 3 4 5 6 Disagree	31] Docters should disclose the results of AIDS tests to the appropriate authorities
36	Agree 1 2 3 4 5 6 Disagree	32] AIDS victims should be isolated or quarantined from society by the state
37	Agree 1 2 3 4 5 6 Disagree	33] Homosexuality should be severely punished because it spreads AIDS
38	Agree 1 2 3 4 5 6 Disagree	34] Prostitution should be severely punished because it spreads AIDS
39	Agree 1 2 3 4 5 6 Disagree	35] Promiscuity should be severely punished because it spreads AIDS
40	Agree 1 2 3 4 5 6 Disagree	36] Intravenous drug users should be severely punished because they spread AIDS
41	Agree 1 2 3 4 5 6 Disagree	37] The use of condoms is not right
42	Agree 1 2 3 4 5 6 Disagree	38] The encouragement of condoms as a means of prevention of AIDS will only lead to greater promiscuity, especially amongst the young
43	Agree 1 2 3 4 5 6 Disagree	39] I personally would never use the condom for any reasons
44	Agree 1 2 3 4 5 6 Disagree	40] AIDS has not made me change my sexual behavior
45	Agree 1 2 3 4 5 6 Disagree	41] Aids is an exceptionally frightening desease
46	Agree 1 2 3 4 5 6 Disagree	42] Alcohol lowers inhibitions and thus if I were drunk I would be less likely to take precautions against AIDS

8. PLEASE ANSWER THE FOLLOWING QUESTIONS [remember responses are completely anonymous]

46 1] Do you feel that AIDS has led to a change in your own sexual behavior, either in terms of frequency of sexual intercourse, number of sexual partners, or use of the condom itself? Please comment..

47 2] Have education campaigns increased your awareness or knowledge about AIDS ? Please comment.

48 3] Have you found any of the questions in this study difficult to understand? Please comment.

49 4] Have you found any of the questions in this study offensive? If so please comment.

50 5] Any other remarks, criticisms or suggestions.

This concludes Part I of the study. Part II will be completed now. Thank you for your help so far.

PART II

1. You will be shown a number of posters that have been used in education strategies by a number of organizations. On your questionnaire you will find a list of descriptive words or phrases. Please record your response to these posters on the scales provided below.

circle 1 if you strongly agree with the descriptor on the left column
circle 2 if you moderately agree with the descriptor on the left column
circle 3 if you only slightly agree with the descriptor on the left column
circle 4 if you only slightly agree with the descriptor on the right column
circle 5 if you moderately agree with the descriptor on the right column
circle 6 if you strongly agree with the descriptor on the right column

N. B. Circle only one response per pair of descriptors, but please ensure that all pairs of descriptors are answered. There are no right or wrong answers.

D U P 4
1 2 3 4

		Poster 1	
5	informative	1 2 3 4 5 6	uninformative
6	emotive	1 2 3 4 5 6	unemotive
7	suggestive	1 2 3 4 5 6	persuasive
8	reassuring	1 2 3 4 5 6	threatening
9	effective	1 2 3 4 5 6	ineffective
10	offensive	1 2 3 4 5 6	inoffensive
11	good	1 2 3 4 5 6	bad
12	moral	1 2 3 4 5 6	immoral
13	decent	1 2 3 4 5 6	shameless

		Poster 2	
14	informative	1 2 3 4 5 6	uninformative
15	emotive	1 2 3 4 5 6	unemotive
16	suggestive	1 2 3 4 5 6	persuasive
17	reassuring	1 2 3 4 5 6	threatening
18	effective	1 2 3 4 5 6	ineffective
19	offensive	1 2 3 4 5 6	inoffensive
20	good	1 2 3 4 5 6	bad
21	moral	1 2 3 4 5 6	immoral
22	decent	1 2 3 4 5 6	shameless

		Poster 3	
23	informative	1 2 3 4 5 6	uninformative
24	emotive	1 2 3 4 5 6	unemotive
25	suggestive	1 2 3 4 5 6	persuasive
26	reassuring	1 2 3 4 5 6	threatening
27	effective	1 2 3 4 5 6	ineffective
28	offensive	1 2 3 4 5 6	inoffensive
29	good	1 2 3 4 5 6	bad
30	moral	1 2 3 4 5 6	immoral
31	decent	1 2 3 4 5 6	shameless
		Poster 4	
32	informative	1 2 3 4 5 6	uninformative
33	emotive	1 2 3 4 5 6	unemotive
34	suggestive	1 2 3 4 5 6	persuasive
35	reassuring	1 2 3 4 5 6	threatening
36	effective	1 2 3 4 5 6	ineffective
37	offensive	1 2 3 4 5 6	inoffensive
38	good	1 2 3 4 5 6	bad
39	moral	1 2 3 4 5 6	immoral
40	decent	1 2 3 4 5 6	shameless
		Poster 5	
41	informative	1 2 3 4 5 6	uninformative
42	emotive	1 2 3 4 5 6	unemotive
43	suggestive	1 2 3 4 5 6	persuasive
44	reassuring	1 2 3 4 5 6	threatening
45	effective	1 2 3 4 5 6	ineffective
46	offensive	1 2 3 4 5 6	inoffensive
47	good	1 2 3 4 5 6	bad
48	moral	1 2 3 4 5 6	immoral
49	decent	1 2 3 4 5 6	shameless
		Poster 6	
50	informative	1 2 3 4 5 6	uninformative
51	emotive	1 2 3 4 5 6	unemotive
52	suggestive	1 2 3 4 5 6	persuasive
53	reassuring	1 2 3 4 5 6	threatening
54	effective	1 2 3 4 5 6	ineffective
55	offensive	1 2 3 4 5 6	inoffensive
56	good	1 2 3 4 5 6	bad
57	moral	1 2 3 4 5 6	immoral
58	decent	1 2 3 4 5 6	shameless

		Poster 7	
59	informative	1 2 3 4 5 6	uninformative
60	emotive	1 2 3 4 5 6	unemotive
61	suggestive	1 2 3 4 5 6	persuasive
62	reassuring	1 2 3 4 5 6	threatening
63	effective	1 2 3 4 5 6	ineffective
64	offensive	1 2 3 4 5 6	inoffensive
65	good	1 2 3 4 5 6	bad
66	moral	1 2 3 4 5 6	immoral
67	decent	1 2 3 4 5 6	shameless
		Poster 8	
68	informative	1 2 3 4 5 6	uninformative
69	emotive	1 2 3 4 5 6	unemotive
70	suggestive	1 2 3 4 5 6	persuasive
71	reassuring	1 2 3 4 5 6	threatening
72	effective	1 2 3 4 5 6	ineffective
73	offensive	1 2 3 4 5 6	inoffensive
74	good	1 2 3 4 5 6	bad
75	moral	1 2 3 4 5 6	immoral
76	decent	1 2 3 4 5 6	shameless

APPENDIX B

Table 1
AIDS Knowledge Scale Unrotated Principal Axis Factor Analysis

Variable	Factor Loading 1	2	3	4	5	Communality
1	.34	-.12	.13	.11	-.27	.23
2	.01	.18	.23	-.02	.14	.11
3	-.05	-.12	-.05	.06	-.11	.04
4	-.07	.09	-.29	-.15	.38	.27
5	-.06	.10	.20	-.23	-.20	.14
6	.24	-.27	.11	.02	.09	.15
7	.06	-.01	.26	-.17	.13	.11
8	.04	.35	.13	.18	-.08	.18
9	.24	.15	.23	-.41	.13	.31
10	.10	.14	-.08	.20	-.25	.14
11	.01	-.12	-.04	.01	-.26	.08
12	-.07	.33	-.01	-.36	-.18	.28
13	.37	.03	-.04	-.01	.04	.14
14	-.19	.24	.05	.29	-.06	.18
15	-.08	.02	-.17	.16	.12	.08
16	.63	.12	-.27	-.04	-.04	.49
17	.51	.24	.04	.08	.03	.32
18	.42	.04	-.31	-.03	-.04	.27
19	.04	.30	.10	.23	.04	.16
20	-.08	.19	-.09	.02	-.22	.10
21	-.17	.16	-.07	-.26	-.15	.15
22	.21	-.15	-.11	-.22	-.20	.17
23	-.22	.14	-.24	-.11	-.14	.16
24	.09	.19	.30	.02	-.07	.14
25	.30	-.17	.22	.08	.09	.18
26	.05	.38	-.12	.07	.25	.23
% Common Variance	31.27	20.30	16.76	16.55	15.12	100.00
% Total Variance	27.33	17.74	14.65	14.46	13.21	87.39

Table 2
Sexual Knowledge Questionnaire Unrotated Principal Axis Factor Analysis

Variance	Factor Loading 1	2	3	4	5	Communality
1	.09	.16	.18	.05	-.03	.07
2	-.25	.21	-.04	-.31	.05	.21
3	.10	.01	.26	-.09	.07	.09
4	.17	.08	.13	-.01	-.17	.08
5	-.16	.18	.15	.08	-.17	.12
6	.01	.32	.30	.06	-.10	.19
7	.05	.22	-.02	-.23	-.03	.11
8	.03	.28	-.19	.10	.34	.24
9	.23	.24	.22	.01	.09	.16
10	-.14	.15	-.25	.02	.06	.11
11	.21	.05	.01	-.18	.00	.08
12	-.04	.39	-.14	.13	.32	.30
13	.01	.32	-.02	-.11	-.10	.12
14	-.19	.08	-.03	.36	-.22	.22
15	-.35	.03	.05	.01	-.19	.16
16	-.40	.28	-.14	-.21	-.16	.33
17	.30	.14	.21	.08	-.25	.23
18	-.21	.05	.13	.26	.13	.15
19	-.20	.08	-.17	.33	-.14	.20
20	-.49	-.16	.33	-.06	.22	.42
21	-.13	.15	-.06	-.01	-.17	.07
22	-.20	.16	.14	.19	.03	.12
23	.02	.20	.36	.11	.14	.20
24	-.35	-.07	.23	-.22	.01	.23
% Common Variance	27.64	21.35	19.66	16.54	14.80	100.00
% Total Variance	22.84	17.64	16.25	13.67	12.23	82.63

APPENDIX C

Table 1
Poster 1 MANOVA by Sexual Opinion Survey Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	Low SD	High M	High SD	F	Sig. of F
informative/uninformative	3.65	1.64	3.29	1.44	0.82	.370
emotive/unemotive	3.29	1.47	3.07	1.29	0.42	.522
suggestive/persuasive	2.71	1.24	3.03	1.43	0.90	.346
reassuring/threatening	3.48	0.96	3.29	1.13	0.53	.471
effective/ineffective	3.90	1.49	3.32	1.54	2.28	.136
offensive/inoffensive	3.90	1.35	4.29	1.60	1.06	.307
good/bad	4.00	1.34	3.16	1.59	5.02	.029*
moral/immoral	3.97	1.14	2.84	1.04	16.66	.000**
decent/shameless	3.55	1.15	2.84	1.39	4.79	.033*

*p < .05. **p < .01.

Table 2
Poster 2 MANOVA by Sexual Opinion Survey Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	Low SD	High M	High SD	F	Sig. of F
informative/uninformative	3.87	1.65	3.00	1.61	4.5	.038
emotive/unemotive	3.03	1.43	2.63	1.31	1.39	.243
suggestive/persuasive	2.19	1.33	2.34	1.56	0.17	.682
reassuring/threatening	4.65	1.02	3.75	1.37	8.64	.005**
effective/ineffective	4.29	1.40	3.28	1.63	6.94	.011*
offensive/inoffensive	2.07	1.18	3.06	1.54	8.26	.006**
good/bad	4.71	1.04	3.56	1.46	12.86	.001**
moral/immoral	4.94	1.00	4.09	1.35	7.86	.007**
decent/shameless	4.84	0.86	3.78	1.36	13.48	.001**

*p < .05. **p < .01.

Table 3
Poster 3 MANOVA by Sexual Opinion Survey Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	1.28	0.52	1.65	0.84	4.30	.042*
emotive/unemotive	3.28	1.63	3.58	1.69	0.51	.477
suggestive/persuasive	4.34	1.49	3.97	1.54	0.97	.329
reassuring/threatening	1.69	0.93	2.00	1.00	1.65	.204
effective/ineffective	1.84	0.88	2.10	1.30	0.82	.369
offensive/inoffensive	5.63	0.71	5.32	1.08	1.75	.191
good/bad	1.72	1.02	1.84	1.07	0.21	.650
moral/immoral	1.69	0.97	1.74	0.86	0.06	.814
decent/shameless	1.59	0.88	1.71	0.86	0.28	.599

*p < .05. **p < .01.

Table 4
Poster 4 MANOVA by Sexual Opinion Survey Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	3.42	1.62	3.90	1.61	1.37	.247
emotive/unemotive	2.85	1.09	2.67	1.32	0.36	.553
suggestive/persuasive	1.94	0.97	1.97	1.16	0.01	.919
reassuring/threatening	3.91	1.28	3.40	1.00	3.03	.087
effective/ineffective	3.61	1.44	3.67	1.61	0.03	.087
offensive/inoffensive	2.58	1.46	3.67	1.49	8.59	.005**
good/bad	4.12	1.29	3.63	1.40	2.07	.156
moral/immoral	4.12	1.45	3.50	1.04	3.74	.058
decent/shameless	4.27	1.28	3.67	1.24	3.62	.062

*p < .05. **p < .01.

Table 5
Poster 5 MANOVA by Sexual Opinion Survey Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	Low SD	High M	High SD	F	Sig. of F
informative/uninformative	4.00	1.52	3.84	1.55	0.17	.685
emotive/unemotive	3.56	1.39	3.03	1.15	2.78	.101
suggestive/persuasive	2.44	1.37	2.53	1.08	0.09	.762
reassuring/threatening	4.41	1.04	3.34	0.75	21.99	.000**
effective/ineffective	4.09	1.57	3.34	1.41	4.05	.049*
offensive/inoffensive	2.44	1.41	3.84	1.48	15.08	.000**
good/bad	4.50	1.19	3.31	1.09	17.30	.000**
moral/immoral	4.38	1.19	3.22	0.98	18.18	.000**
decent/shameless	4.41	1.24	3.47	1.24	9.11	.004**

*p < .05. **p < .01.

Table 6
Poster 6 MANOVA by Sexual Opinion Survey Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	Low SD	High M	High SD	F	Sig. of F
informative/uninformative	3.28	1.71	3.48	1.63	0.23	.632
emotive/unemotive	2.75	1.44	2.84	1.19	0.07	.791
suggestive/persuasive	3.09	1.55	3.00	1.18	0.07	.789
reassuring/threatening	2.56	1.32	2.90	1.04	1.29	.261
effective/ineffective	2.94	1.80	3.29	1.53	0.70	.405
offensive/inoffensive	4.72	1.40	4.58	1.12	0.19	.667
good/bad	2.81	1.66	2.84	1.24	0.01	.944
moral/immoral	2.72	1.44	2.55	1.03	0.29	.592
decent/shameless	2.59	1.43	2.71	1.22	0.12	.731

*p < .05. **p < .01.

Table 7
Poster 7 MANOVA by Sexual Opinion Survey Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	4.41	1.46	3.53	1.52	5.50	.022*
emotive/unemotive	3.88	1.86	2.81	0.90	16.38	.000**
suggestive/persuasive	2.47	1.05	2.84	1.37	1.51	.223
reassuring/threatening	4.25	1.08	3.91	1.03	1.71	.196
effective/ineffective	4.47	1.22	3.31	1.31	13.42	.001**
offensive/inoffensive	2.97	1.43	3.31	1.62	0.81	.370
good/bad	4.44	1.13	3.81	1.36	1.01	.050
moral/immoral	4.34	1.13	3.63	1.29	5.65	.021*
decent/shameless	4.22	1.21	3.38	1.34	6.99	.010*

*p < .05. **p < .01.

Table 8
Poster 8 MANOVA by Sexual Opinion Survey Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	2.72	1.35	3.00	1.39	0.65	.422
emotive/unemotive	2.78	1.43	2.83	1.12	0.03	.874
suggestive/persuasive	3.86	1.72	4.17	1.42	0.53	.470
reassuring/threatening	2.66	1.23	2.80	1.00	0.26	.617
effective/ineffective	2.84	1.46	2.66	1.39	1.14	.290
offensive/inoffensive	5.63	0.66	5.27	1.01	2.75	.102
good/bad	2.25	1.27	2.20	1.06	0.03	.868
moral/immoral	1.84	0.95	1.73	0.83	0.26	.629
decent/shameless	1.63	0.83	1.80	0.91	0.57	.455

*p < .05. **p < .01.

Table 9
Poster 1 MANOVA by F Scale Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	3.24	1.71	3.57	1.46	0.77	.382
emotive/unemotive	3.18	1.38	3.09	1.29	0.08	.779
suggestive/persuasive	2.77	1.52	2.63	1.24	0.17	.684
reassuring/threatening	3.59	1.26	3.31	0.90	1.09	.301
effective/ineffective	3.41	1.40	3.66	1.63	0.45	.504
offensive/inoffensive	4.03	1.51	4.31	1.35	0.69	.410
good/bad	3.44	1.56	3.14	1.29	0.75	.389
moral/immoral	3.21	1.43	3.40	1.17	0.38	.539
decent/shameless	2.97	1.38	3.06	1.26	0.07	.786

*p <-.05. **p < .01.

Table 10
Poster 2 MANOVA by F Scale Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	3.44	1.85	3.76	1.69	0.57	.454
emotive/unemotive	2.68	1.51	2.76	1.40	0.05	.817
suggestive/persuasive	2.15	1.18	2.24	1.54	0.09	.770
reassuring/threatening	4.77	1.13	4.14	1.27	4.82	.031*
effective/ineffective	3.94	1.48	3.87	1.60	0.04	.836
offensive/inoffensive	2.15	1.18	2.68	1.60	2.47	.121
good/bad	4.56	1.28	4.16	1.39	1.56	.216
moral/immoral	4.79	1.07	4.24	1.26	3.93	.051
decent/shameless	4.44	1.11	4.24	1.40	0.43	.514

*p < .05. **p < .01.

Table 11
Poster 3 MANOVA by F Scale Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	1.41	0.66	1.43	0.87	0.01	.911
emotive/unemotive	3.24	1.58	3.89	1.60	3.03	.086
suggestive/persuasive	4.09	1.60	4.57	1.30	1.93	.170
reassuring/threatening	2.06	1.13	1.84	0.90	0.84	.362
effective/ineffective	1.79	0.88	2.30	1.27	3.72	.058
offensive/inoffensive	5.38	1.21	5.51	0.73	0.31	.578
good/bad	1.77	1.02	1.84	1.04	0.09	.766
moral/immoral	1.56	0.82	1.84	0.99	1.66	.202
decent/shameless	1.56	0.75	1.81	1.00	1.44	.235

*p < .05. **p < .01.

Table 12
Poster 4 MANOVA by F Scale Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	3.50	1.69	3.95	1.81	1.14	.288
emotive/unemotive	2.56	1.31	2.84	1.42	0.74	.394
suggestive/persuasive	1.88	1.32	2.03	1.19	0.24	.629
reassuring/threatening	3.79	1.61	3.68	0.94	0.15	.704
effective/ineffective	3.56	1.62	3.73	1.52	0.21	.648
offensive/inoffensive	2.62	1.54	3.57	1.48	7.02	.010*
good/bad	3.79	1.57	3.62	1.23	0.27	.607
moral/immoral	4.03	1.43	3.76	1.28	0.72	.398
decent/shameless	3.94	1.46	3.70	1.27	0.54	.463

*p < .05. **p < .01.

Table 13
Poster 5 MANOVA by F Scale Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	3.24	1.86	3.97	1.66	3.12	.082
emotive/unemotive	3.09	1.56	2.95	1.39	0.16	.686
suggestive/persuasive	2.35	1.35	2.35	1.36	0.00	.996
reassuring/threatening	3.82	1.31	3.81	0.78	0.00	.960
effective/ineffective	3.32	1.74	3.54	1.46	0.33	.570
offensive/inoffensive	3.03	1.62	3.49	1.63	1.40	.240
good/bad	3.65	1.59	3.65	0.92	0.00	.996
moral/immoral	3.85	1.33	3.60	1.04	0.84	.363
decent/shameless	3.79	1.43	3.60	1.21	0.40	.527

*p < .05. **p < .01.

Table 14
Poster 6 MANOVA by F Scale Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	2.97	1.73	4.14	1.55	8.95	.004**
emotive/unemotive	2.85	1.50	3.08	1.38	0.44	.507
suggestive/persuasive	3.38	1.63	2.70	1.13	4.22	.044*
reassuring/threatening	2.79	1.59	3.32	0.97	2.92	.092
effective/ineffective	2.88	1.70	3.73	1.54	4.85	.031*
offensive/inoffensive	4.68	1.41	4.65	1.09	0.01	.926
good/bad	2.68	1.68	3.00	1.25	0.86	.358
moral/immoral	2.50	1.46	2.81	1.08	1.05	.308
decent/shameless	2.50	1.44	2.87	1.27	1.28	.261

*p < .05. **p < .01.

Table 15
Poster 7 MANOVA by F Scale Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	3.53	1.75	3.68	1.60	0.14	.714
emotive/unemotive	3.24	1.39	3.22	1.38	0.00	.954
suggestive/persuasive	2.06	1.07	2.87	1.44	7.08	.010*
reassuring/threatening	4.50	1.05	3.78	1.08	7.96	.006**
effective/ineffective	3.62	1.48	3.60	1.48	0.00	.948
offensive/inoffensive	2.62	1.42	3.49	1.69	5.45	.022*
good/bad	4.41	1.23	3.70	1.39	5.12	.027*
moral/immoral	4.44	1.33	3.62	1.38	6.46	.013*
decent/shameless	4.15	1.40	3.46	1.43	4.21	.044*

*p < .05. **p < .01.

Table 16
Poster 8 MANOVA by F Scale Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	2.53	1.44	2.86	1.62	0.81	.370
emotive/unemotive	2.88	1.45	2.86	1.38	0.00	.950
suggestive/persuasive	4.15	1.60	4.47	1.28	0.89	.349
reassuring/threatening	2.82	1.31	2.53	1.16	1.00	.321
effective/ineffective	2.56	1.40	2.56	1.25	0.00	.992
offensive/inoffensive	5.32	1.01	5.53	0.65	1.02	.315
good/bad	2.24	1.21	2.25	1.13	0.00	.958
moral/immoral	1.79	0.98	1.97	1.03	0.55	.461
decent/shameless	1.79	0.98	1.69	0.79	0.22	.639

*p < .05. **p < .01.

Table 17
Poster 1 MANOVA by Cognitive Complexity (ITI) Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	3.49	1.59	3.63	1.52	0.22	.638
emotive/unemotive	3.37	1.31	3.11	1.39	1.05	.307
suggestive/persuasive	2.75	1.16	2.75	1.37	0.00	.970
reassuring/threatening	3.29	0.97	3.35	1.08	0.08	.775
effective/ineffective	3.45	1.54	3.95	1.49	1.89	.092
offensive/inoffensive	3.98	1.39	4.30	1.46	1.33	.252
good/bad	3.28	1.39	3.44	1.44	0.36	.549
moral/immoral	3.31	1.29	3.09	1.06	1.00	.319
decent/shameless	3.08	1.34	2.98	1.20	0.15	.696

*p < .05. **p < .01.

Table 18
Poster 2 MANOVA by Cognitive Complexity (ITI) Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	3.33	1.57	3.43	1.68	0.10	.755
emotive/unemotive	2.75	1.41	2.66	1.48	0.10	.747
suggestive/persuasive	2.33	1.31	2.03	1.28	1.45	.232
reassuring/threatening	4.47	1.22	4.09	1.25	2.63	.108
effective/ineffective	3.82	1.47	3.71	1.68	0.15	.702
offensive/inoffensive	2.35	1.29	2.67	1.50	1.40	.240
good/bad	4.31	1.41	4.22	1.38	0.11	.738
moral/immoral	4.53	1.17	4.29	1.21	1.06	.305
decent/shameless	4.63	1.08	4.05	1.22	6.74	.011*

*p < .05. **p < .01.

Table 19
Poster 3 MANOVA by Cognitive Complexity (ITI) Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	1.56	0.88	1.37	0.76	1.41	.238
emotive/unemotive	3.82	1.54	3.49	1.60	1.18	.279
suggestive/persuasive	4.48	1.34	4.32	1.53	0.32	.571
reassuring/threatening	1.90	0.81	1.78	0.93	0.51	.478
effective/ineffective	1.96	0.97	1.90	1.17	0.09	.767
offensive/inoffensive	5.20	1.29	5.54	0.77	2.91	.091
good/bad	1.68	0.84	1.71	1.00	0.03	.859
moral/immoral	1.76	0.89	1.76	0.95	0.00	.988
decent/shameless	1.60	0.76	1.73	0.91	0.64	.427

*p < .05. **p < .01.

Table 20
Poster 4 MANOVA by Cognitive Complexity (ITI) Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	3.51	1.67	3.91	1.64	1.60	.209
emotive/unemotive	2.55	1.29	2.83	1.33	1.20	.276
suggestive/persuasive	2.26	1.23	1.88	1.18	2.65	.107
reassuring/threatening	3.37	1.22	3.79	1.07	3.61	.060
effective/ineffective	3.51	1.63	3.88	1.47	1.52	.220
offensive/inoffensive	3.28	1.46	3.12	1.50	0.28	.596
good/bad	3.57	1.38	3.79	1.37	0.70	.406
moral/immoral	3.73	1.17	3.81	1.25	0.12	.727
decent/shameless	3.82	1.28	3.77	1.25	0.04	.833

*p < .05. **p < .01.

Table 21
Poster 5 MANOVA by Cognitive Complexity (ITI) Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	3.37	1.66	3.80	1.69	1.75	.189
emotive/unemotive	2.75	1.18	3.31	1.53	4.49	.036*
suggestive/persuasive	2.31	1.35	2.54	1.29	0.82	.366
reassuring/threatening	3.59	1.00	3.97	1.13	3.39	.068
effective/ineffective	3.31	1.57	3.64	1.60	1.19	.277
offensive/inoffensive	3.08	1.48	3.44	1.58	1.52	.220
good/bad	3.59	1.19	3.76	1.37	0.50	.480
moral/immoral	3.63	1.11	3.66	1.12	0.02	.876
decent/shameless	3.77	1.26	3.75	1.27	0.01	.938

*p < .05. **p < .01.

Table 22
Poster 6 MANOVA by Cognitive Complexity (ITI) Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	3.48	1.63	3.64	1.56	0.29	.594
emotive/unemotive	3.06	1.33	2.95	1.42	0.17	.677
suggestive/persuasive	3.34	1.49	2.98	1.29	1.79	.184
reassuring/threatening	2.74	1.18	3.02	1.20	1.47	.227
effective/ineffective	3.08	1.46	3.37	1.62	0.97	.326
offensive/inoffensive	4.64	1.17	4.64	1.16	0.00	.986
good/bad	2.68	1.33	2.95	1.42	1.03	.313
moral/immoral	2.40	1.14	2.68	1.15	1.59	.210
decent/shameless	2.44	1.26	2.66	1.21	0.86	.354

*p < .05. **p < .01.

Table 23
Poster 7 MANOVA by Cognitive Complexity (ITI) Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	3.51	1.55	3.92	1.45	2.00	.161
emotive/unemotive	3.26	1.37	3.36	1.23	0.17	.684
suggestive/persuasive	2.55	1.15	2.83	1.35	1.35	.247
reassuring/threatening	4.08	1.02	4.00	1.03	0.16	.690
effective/ineffective	3.71	1.30	3.97	1.36	1.04	.310
offensive/inoffensive	3.22	1.39	3.15	1.56	0.05	.824
good/bad	4.02	1.10	3.92	1.32	0.20	.656
moral/immoral	3.90	1.08	3.85	1.38	0.05	.820
decent/shameless	3.84	1.16	3.59	1.35	1.07	.304

*p < .05. **p < .01.

Table 24
Poster 8 MANOVA by Cognitive Complexity (ITI) Scores - Comparison of Mean Responses of Low vs. High Scorers to Adjectives

Adjective	Low M	SD	High M	SD	F	Sig. of F
informative/uninformative	2.86	1.34	2.93	1.55	0.06	.811
emotive/unemotive	3.04	1.25	2.86	1.48	0.46	.500
suggestive/persuasive	3.77	1.46	4.25	1.46	2.92	.090
reassuring/threatening	2.90	1.06	2.72	1.31	0.63	.431
effective/ineffective	2.86	1.27	2.58	1.41	1.20	.276
offensive/inoffensive	5.33	0.93	5.49	0.83	0.87	.353
good/bad	2.33	1.03	2.18	1.27	0.50	.483
moral/immoral	1.86	0.87	1.81	0.93	0.10	.750
decent/shameless	1.80	0.87	1.68	0.87	0.51	.477

*p < .05. **p < .01.

Table 25
Poster 1 MANOVA by Gender - Comparison of Male and Female Mean Responses

Adjective	Male M	Male SD	Female M	Female SD	F	Sig. of F
informative/uninformative	3.49	1.57	3.62	1.53	0.22	.644
emotive/unemotive	3.18	1.23	3.31	1.40	0.29	.593
suggestive/persuasive	2.76	1.26	2.83	1.35	0.08	.776
reassuring/threatening	3.56	0.94	3.25	1.09	2.82	.095
effective/ineffective	3.55	1.36	3.76	1.60	0.63	.426
offensive/inoffensive	4.02	1.33	4.13	1.47	0.18	.669
good/bad	3.27	1.27	3.48	1.47	0.68	.410
moral/immoral	3.20	1.06	3.32	1.29	0.33	.564
decent/shameless	3.24	1.23	2.93	1.28	1.84	.177

*p < .05. **p < .01.

Table 26
Poster 2 MANOVA by Gender - Comparison of Male and Female Mean Responses to Adjectives

Adjective	Male M	Male SD	Female M	Female SD	F	Sig. of F
informative/uninformative	3.43	1.53	3.49	1.73	0.04	.826
emotive/unemotive	2.64	1.21	2.67	1.53	0.01	.909
suggestive/persuasive	2.12	1.10	2.13	1.46	0.00	.959
reassuring/threatening	4.40	1.16	4.31	1.28	0.13	.722
effective/ineffective	3.77	1.41	3.77	1.68	0.00	.998
offensive/inoffensive	2.45	1.39	2.49	1.41	0.03	.851
good/bad	4.27	1.37	4.19	1.39	0.10	.757
moral/immoral	4.46	1.13	4.44	1.26	0.01	.904
decent/shameless	4.34	1.12	4.40	1.22	0.08	.782

*p < .05. **p < .01.

Table 27
Poster 3 MANOVA by Gender - Comparison of Male and Female Mean Responses to Adjectives

Adjective	Male M	SD	Female M	SD	F	Sig. of F
informative/uninformative	1.71	0.94	1.27	0.65	9.90	.002**
emotive/unemotive	3.98	1.46	3.30	1.65	5.97	.016*
suggestive/persuasive	4.29	1.21	4.47	1.62	0.49	.486
reassuring/threatening	2.25	1.04	1.50	0.76	22.60	.000**
effective/ineffective	2.07	0.99	1.74	1.06	3.20	.076
offensive/inoffensive	5.18	1.06	5.64	0.92	6.79	.010*
good/bad	2.02	1.05	1.42	0.72	14.84	.000**
moral/immoral	2.06	0.93	1.50	0.81	14.90	.000**
decent/shameless	1.91	0.87	1.41	0.72	12.97	.000**

*p < .05. **p < .01.

Table 28
Poster 4 MANOVA by Gender - Comparison of Male and Female Mean Responses to Adjectives

Adjective	Male M	SD	Female M	SD	F	Sig. of F
informative/uninformative	3.84	1.57	3.66	1.77	0.34	.563
emotive/unemotive	2.70	1.17	2.62	1.37	0.09	.763
suggestive/persuasive	2.13	1.16	1.78	1.16	2.77	.098
reassuring/threatening	3.70	1.12	3.49	1.24	0.93	.337
effective/ineffective	3.78	1.41	3.60	1.66	0.45	.502
offensive/inoffensive	3.09	1.42	3.11	1.55	0.00	.549
good/bad	3.82	1.28	3.62	1.45	0.64	.425
moral/immoral	3.93	0.98	3.76	1.40	0.60	.441
decent/shameless	3.98	1.13	3.76	1.33	1.02	.314

*p < .05. **p < .01.

Table 29
Poster 5 MANOVA by Gender - Comparison of Male and Female Mean Responses to Adjectives

Adjective	Male M	Male SD	Female M	Female SD	F	Sig. of F
informative/uninformative	3.47	1.64	3.96	1.68	3.03	.084
emotive/unemotive	3.09	1.23	2.97	1.51	0.22	.638
suggestive/persuasive	2.46	1.19	2.42	1.44	0.04	.849
reassuring/threatening	3.70	1.06	3.88	1.13	0.87	.353
effective/ineffective	3.32	1.45	3.73	1.63	2.19	.141
offensive/inoffensive	3.27	1.45	3.12	1.67	0.27	.602
good/bad	3.54	1.24	3.88	1.31	2.30	.133
moral/immoral	3.63	1.04	3.82	1.23	0.95	.330
decent/shameless	3.61	1.20	3.97	1.26	2.80	.097

*p < .05. **p < .01.

Table 30
Poster 6 MANOVA by Gender - Comparison of Male and Female Mean Responses to Adjectives

Adjective	Male M	Male SD	Female M	Female SD	F	Sig. of F
informative/uninformative	3.87	1.49	3.39	1.65	0.10	.751
emotive/unemotive	3.26	1.21	2.89	1.48	1.23	.270
suggestive/persuasive	2.89	1.01	3.35	1.60	0.62	.433
reassuring/threatening	3.24	0.96	2.64	1.27	2.48	.118
effective/ineffective	3.44	1.39	3.04	1.64	0.12	.726
offensive/inoffensive	4.15	1.13	4.90	1.14	5.76	.018*
good/bad	3.24	1.28	2.60	1.43	3.48	.064
moral/immoral	2.87	1.06	2.46	1.23	2.64	.107
decent/shameless	2.95	1.28	2.38	1.17	7.74	.006**

*p < .05. **p < .01.

Table 31
Poster 7 MANOVA by Gender - Comparison of Male and Female Mean Responses to Adjectives

Adjective	Male M	Male SD	Female M	Female SD	F	Sig. of F
informative/uninformative	3.75	1.52	3.84	1.60	0.10	.751
emotive/unemotive	3.16	1.17	3.42	1.41	1.23	.270
suggestive/persuasive	2.55	1.17	2.73	1.33	0.62	.433
reassuring/threatening	4.19	0.94	3.91	1.11	2.48	.118
effective/ineffective	3.86	1.31	3.77	1.46	0.12	.726
offensive/inoffensive	2.82	1.32	3.45	1.57	5.76	.018*
good/bad	4.23	1.08	3.82	1.34	3.49	.064
moral/immoral	4.09	1.15	3.72	1.40	2.63	.107
decent/shameless	4.11	1.11	3.47	1.41	7.75	.006**

*p < .05. **p < .01.

Table 32
Poster 8 MANOVA by Gender - Comparison of Male and Female Mean Responses to Adjectives

Adjective	Male M	Male SD	Female M	Female SD	F	Sig. of F
informative/uninformative	2.96	1.28	2.86	1.61	0.15	.696
emotive/unemotive	2.91	1.15	2.93	1.54	0.01	.936
suggestive/persuasive	3.77	1.29	4.32	1.56	4.58	034*
reassuring/threatening	3.02	1.02	2.54	1.29	5.15	.025*
effective/ineffective	2.70	1.16	2.64	1.48	0.06	.811
offensive/inoffensive	5.11	0.97	5.64	0.78	11.94	.001**
good/bad	2.32	1.11	2.17	1.25	0.53	.467
moral/immoral	1.96	0.95	1.70	0.85	2.86	.094
decent/shameless	1.91	0.96	1.58	0.78	4.52	.035*

*p < .05. **p < .01.